## UNITED STATES DISTRICT COURT FOR THE DISTRICT OF NEVADA

KIRSTIN BLAISE LOBATO,	)
Plaintiff,	) Case No. 2:19-cv-01273-RFB-EJY
V.	) Judge Richard F. Boulware, II
LAS VEGAS METROPOLITAN POLICE DEPARTMENT, NEVADA, THOMAS	) Magistrate Judge Elayna J. Youchah
THOWSEN, and JAMES LAROCHELLE,	)
Defendants.	, )

# EXHIBIT 14

## UNITED STATES DISTRICT COURT DISTRICT OF NEVADA

KIRSTIN BLAISE LOBATO,  Plaintiff, v.  LAS VEGAS METROPOLITAN POLICE DEPARTMENT, NEVADA, THOMAS THOWSEN, and JAMES LAROCHELLE,	Case No. 2:19-cv-01273-RFB-EJY  Judge Richard F. Boulware, II  Magistrate Judge Elayna J. Youchah  DECLARATION OF ANDREW BAKER
Defendants.	,

Pursuant to 28 U.S.C. § 1746, I, Andrew Baker, declare under penalty of perjury that the following is true and correct to the best of my knowledge:

- 1. I am over 18 years old and competent to make this declaration
- 2. I prepared an expert report in the above-captioned case, attached to this Declaration as an exhibit.
- 3. The contents of my report are true and accurate to the best of my knowledge, and the opinions offered therein are each to a reasonable degree of professional certainty. If called to testify, I would testify consistently with the opinions offered in my report.

Andrew Baker

August 5, 2021

Date



via electronic mail

January 12, 2021

Elizabeth Wang Loevy & Loevy 2060 Broadway, Suite 460 Boulder, CO 80302

Re: Kirstin Blaise Lobato v. LVMPD, et al., No. 2:19-cv-1273

Dear Ms. Wang:

I have been retained by Plaintiff's counsel as an expert in the field of forensic pathology to review to death of Duran Bailey, specifically regarding the likely time of Mr. Bailey's death.

I incorporate by reference my report dated March 26, 2017 (attached hereto as Exhibit 1 and Bates-stamped Lobato 9667-9672), and my testimony at the evidentiary hearing held on October 9, 2017 in Ms. Lobato's post-conviction case (attached hereto as Exhibit 2, Bates-stamped Lobato 6818-7068).

In my prior report and testimony, I set forth a complete statement of all opinions that I will express and the basis and reasons for them, the facts or data considered by me in forming them, and any exhibits that will be used to summarize or support them. In addition, attached are a current CV, which contain my qualifications, including a list of all publications authored in the previous 10 years, and a list of all cases in which, during the previous 4 years, I have testified as an expert at trial or by deposition. And finally, my rate of compensation is \$600/hour for consulting time.

Sincerely,

Andrew Baker, MD Forensic Pathologist



Andrew M. Baker, M.D., PLLC 8897 Aztec Drive Eden Prairie, MN 55347 Ph: 612-741-5562 Fax: 952-949-0826 andrewbakermd@comcast.net

via electronic mail

March 26, 2017

Vanessa Potkin Director of Post-Conviction Litigation The Innocence Project 40 Worth Street, Suite 701 New York, NY 10013

Dear Ms. Potkin:-

At your request, I have reviewed the death of Duran Bailey, specifically regarding the likely time of Mr. Bailey's death. The materials utilized in this review were:

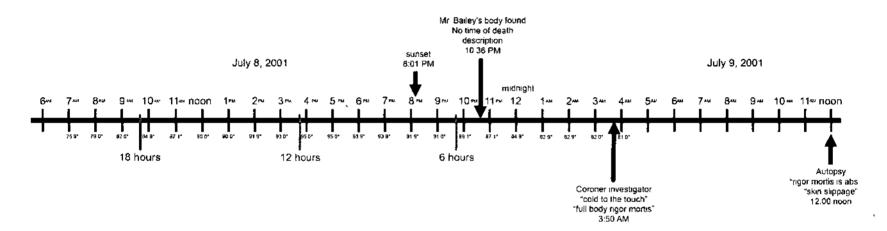
- Records of the Clark County Coroner (including the autopsy report and investigator's narrative report)
- Autopsy photographs
- Crime scene photographs
- Transcript of the preliminary hearing testimony of Lary Simms, DO
- Transcript of the trial testimony of Lary Simms, DO
- The written reports of Drs. Gail Anderson and Linda-Lou O'Connor
- Hourly weather/temperature history for Las Vegas, NV, July 8-9, 2001

#### BACKGROUND

Duran Bailey died of blunt head trauma and multiple stab wounds. Mr. Bailey's body was found at 22:36 on July 8, 2001. His body was under a pile of loose garbage, in an open garbage enclosure near a garbage bin. The law enforcement records from the time of body discovery did not record any of the typical observations (livor, rigor, algor) that medicolegal investigators and forensic pathologists utilize to estimate a time of death.

An investigator from the coroner's office arrived at the scene and pronounced death at 03:50 on July 9, 2001, describing the skin as "cold to the touch" and the body in "full body rigor mortis." At the time of the autopsy, which commenced at noon on July 9, the pathologist (Dr. Simms) recorded "rigor mortis is absent" and noted "multiple areas of skin slippage and areas of discoloration consistent with early decomposition."

Kirstin Blaise Lobato was convicted of killing Mr. Bailey.



Timeline of July 8-9, 2001, with hourly temperatures. The 6-, 12-, and 18-hour marks prior to the coroner's investigator's examination of the body and assessment of rigor mortis are in red. In his testimony (excerpted below), Dr. Simms allowed for a postmortem interval of up to 24 hours, but favored 12-18 hours as more likely.

In the preliminary hearing held only a month after Mr. Bailey was found dead, Dr. Simms initially testified, when asked if he had an opinion on the time of death:

No. And I think the subject was brought up that wasn't an issue at the time of the case. I may be able to do some testing and come up with a broad window, if that's an issue that will serve the court. I don't have any opinion as of right now (page 32).

#### Upon further questioning, Dr. Simms stated:

I would say he had died a lot closer to the time he was discovered than not. So it was definitely within 24 hours. And probably more likely than not some time within 12 hours of when he was discovered (page 33).

#### During Ms. Lobato's criminal trial in 2006, Dr. Simms testified:

Well, just based on the rigor mortis that was present at the scene and the level of decomposition that I saw, I thought a good interval where I would have a good chance of being right would be anywhere from 8 to 24 hours prior to when they [the coroner investigator] did the examination on him. (p VII-146)

#### Dr. Simms acknowledged that temperature can have an effect on rigor mortis:

One of the most important things is the ambient temperature, the temperature outside. If you have a very cold area, like if it happens in the winter, then rigor mortis, it's gonna take a long time to form, it's gonna stay a long time, and it's gonna take a long time to go away, so it's really drawn out. If you have a very, very warm environment, it can go through those phases very, very rapidly. (p VII-147)

#### On cross examination, Dr. Simms replied "More than likely, yes" when asked:

So and that's to a reasonable medical certainty, that 12 to 18 hour period, 8 to 24. You've expanded the time period, which is even more inclusive, but the 12 to 18 is still more than likely? (p VIII-21)

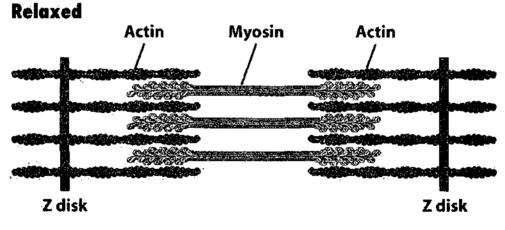
#### He responded "I believe it is, yes" when asked:

So our 12 to 18 before 3:50 is pretty fair to a reasonable medical certainty? (p VIII-24)

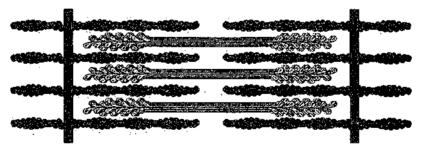
#### POSTMORTEM INTERVAL (TIME OF DEATH) ESTIMATIONS

Postmortem interval estimation by a pathologist is typically based on algor mortis (cooling of the body), livor mortis (pooling of blood in the body), and rigor mortis (stiffening of the muscles). Each of these features is affected by many variables, and assessment of each of these features—particularly rigor mortis— is subjective. Livor may be difficult to assess in more darkly pigmented individuals, particularly when lighting is poor and/or there has been extensive blood loss due to injury or disease. The rate of cooling is dependent on the ambient temperature, clothing, and the various mechanisms by which heat escapes the body (radiation, convection, conduction, etc.)

Rigor mortis is a chemical reaction that occurs when the body is depleted of adenosine triphosphate (ATP) following death. ATP is required to relax the actin-myosin cross-bridges that form the basis of muscular contraction and relaxation. With the loss of ATP in the hours after death, the actin-myosin bridges are fused and the muscles of the flaccid body become rigid. After a period of time, enzymes degrade the myosin heads and the muscles become flaccid again.

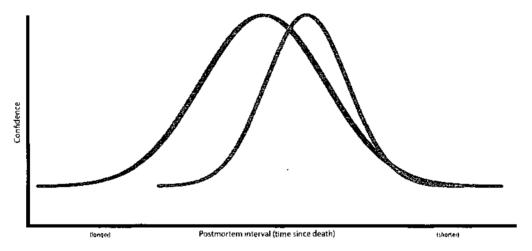


### **Contracted**



Sliding actin and myosin bridges form the basis for muscular relaxation and contraction. Adapted from **Molecular Cell Biology** 6<sup>th</sup> edition, Figure 17-30, 2008 W.H Freeman and Company.

In the broadest general terms, under "normal" temperate conditions, rigor mortis typically is detectable 30 min to 1 hour after death, becomes fully developed by 6-12 hours, remains for about 12 hours, and then disappears over the next 12 hours. Many variables affect these general estimates. Antemortem exertion, which increases body temperature and acidosis in the muscles, would be expected to accelerate the onset of rigor mortis. Because rigor mortis is a chemical reaction, and therefore very temperature-dependent, it will both commence and dissipate faster in a hot environment. Thus, in a hot environment a body found in full rigor will have had a shorter postmortem interval than the same body found at room temperature:



The blue curve illustrates the relative confidence of a postmortem interval estimate based on rigor under "average" conditions. The orange curve represents the effect of a hot environment: the curve is now narrower (to reflect the body staying in rigor a shorter period of time) and shifted closer to the time the rigor is observed (to reflect the more rapid onset of rigor). The heat in Las Vegas at the time Mr. Bailey died makes a long postmortem interval even more unlikely than under "average" conditions.

In Mr. Bailey's case, weather data recorded temperatures in the mid 80s to mid 90s F throughout the day and evening of July 8, 2001, dipping only into the low 80s after midnight and in the very early hours of July 9. These high temperatures would undoubtedly serve to accelerate the onset and dissipation of rigor—Spitz notes that "in a hot environment, for example, rigor mortis may come and go in only 9-12 hours." Given the very high temperatures in Las Vegas around the time Mr. Bailey was killed—even in the absence of any other cues as to time of death—it would certainly seem far more likely that a short time of death estimate would have been more accurate than one extending beyond 18 hours. The observations that Mr. Bailey's body transitioned from "full body rigor mortis" at 3:50 a.m. to all rigor being absent at noon when the autopsy commenced provide even further evidence for asserting a shorter postmortem interval.

5

<sup>&</sup>lt;sup>1</sup> Spitz and Fisher's Medicolegal Investigation of Death: Guidelines for the Application of Pathology to Crime Investigation 4th Edition. Charles C Thomas Pub Ltd, 2005.

These two observations, only 8 hours apart, indicate a markedly *accelerated* rate of rigor dissipating (as illustrated by the orange curve, above).

Time of death assessments made by pathologists are merely estimates. Any time of death estimate based only on the classic postmortem changes of rigor and temperature must be reconsidered when more compelling data arise that serve to sharply refine and constrain that initial estimate, or render some parts of an estimate completely moot. Examples of 'more compelling data' familiar to lay individuals would include video footage, reliable witnesses, surveillance photos, text messages, or any other of a number of simple and everyday examples that easily establish when a decedent was still alive. In a similar fashion, other forensic science disciplines (such as forensic entomology) can be brought to bear to not only refine, but just as sharply define, a more decisive time of death estimate.

In Mr. Bailey's case, just such scientific data *have* been produced—the *absence* of any fly colonization of Mr. Bailey's body. The absence of fly colonization on Mr. Bailey's body clearly places his death *after* sunset (20:01 on July 8, 2001), as the flies that would have colonized his body are active only during daylight hours. For Mr. Bailey to have been killed by Ms. Lobato would require a scenario in which Mr. Bailey's severely injured and bloodied body, lying amidst trash in the daylight in 90+ degree temperatures for many hours, never attracted the attention of flies that routinely colonize dead bodies and begin laying eggs on those bodies within minutes. This case was reviewed by two entomologists in 2009 and 2010 (Drs. Gail Anderson and Linda-Lou O'Connor, respectively), concluding that Mr. Bailey's postmortem interval did not begin until after sunset. A third nationally renowned forensic entomologist (Dr. Jeffery Tomberlin) has now independently reviewed the case and reached a similar conclusion.

Given the compelling entomological evidence developed since Ms. Lobato's conviction—which effectively sets any time of death estimate as beginning at approximately 20:01 on July 8, 2001—it is my opinion that such findings essentially exclude Mr. Bailey's death during the daylight hours of July 8, 2001. Nothing about the entomologists' scientific conclusions is at odds with the coroner's investigator's observations of full rigor on the morning of July 9, 2001. The entomological evidence does effectively truncate any time of death estimate that would be longer than approximately 8 hours—the length of time between sunset (the cessation of fly activity) and the time the body was examined by the coroner's investigator.

Very truly yours,

Andrew Baker, MD Forensic Pathologist RTRAN

DISTRICT COURT

CLARK COUNTY, NEVADA

STATE OF NEVADA,

Plaintiff,

V.

Defendant.

)

CASE NO. C-01-177394

DEPT. NO. XXIII

Defendant.

BEFORE THE HONORABLE STEFANY A. MILEY,

DISTRICT COURT JUDGE

MONDAY, OCTOBER 9, 2017

RECORDER'S TRANSCRIPT OF EVIDENTIARY HEARING - DAY 1

APPEARANCES:

For the Plaintiff: SANDRA K. DIGIACOMO

For the Defendant: RICHARD SCHONFELD

ROBERT Z. DE MARCO Chesnoff & Schonfeld 520 South Fourth Street

Las Vegas, NV 89101

VANESSA POTKIN
BARRY SCHECK
JANE PUCHER
ADNAN SULTAN

Innocence Project

40 Worth Street, Ste. 701

New York, NY 10013

TRANSCRIBED BY: BRYWN WHATFORD, CSR No. 14234

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1	A Correct.
2	Q But now, 11 years later, had you known about the
3	negative entomologist's evidence, you would have done
4	something with that?
5	A I certainly would have pursued it as an avenue to
6	change that time of death closer to when we felt even more
7	comfortable with our alibi.
8	MS. DIGIACOMO: Nothing further.
9	THE COURT: Are you finished?
10	MR. SCHECK: Yes.
11	THE COURT: Thank you, Mr. Schieck.
12	THE WITNESS: Thank you, your Honor.
13	THE COURT: Take a break just until 3:00 o'clock.
14	MS. DIGIACOMO: Thank you.
15	[RECESS AT 02:50 P.M.; PROCEEDINGS RESUMED AT
16	03:04 P.M.]
17	THE COURT: All right. We're back on the record. The
18	next witness, please. Who are you calling next?
19	MS. POTKIN: Dr. Andrew Baker.
20	THE BAILIFF: Doctor, please remain standing and
21	please raise your right hand to be sworn in by the clerk.
22	
23	DR. ANDREW BAKER,
24	[having been called as a witness and being first duly

```
1
     sworn testified as follows:]
 2
         THE WITNESS: I do.
         THE CLERK: Thank you. Please be seated. Please
 3
     state and spell your first and last name for the record.
 4
 5
         THE WITNESS: My first name is Andrew, A-n-d-r-e-w.
     Last name is Baker, B-a-k-e-r.
 6
 7
         THE CLERK: Thank you.
 8
 9
                         DIRECT EXAMINATION
     BY MS. POTKIN:
10
11
              Good afternoon, Dr. Baker.
         0
              Good afternoon.
12
         Α
13
              What is your occupation?
         Q
              I am a forensic pathologist and a medical
14
         Α
     examiner.
15
16
              And what does a forensic pathologist do?
17
              We are physicians who specialize in figuring out
18
     how and why people died and who those people were. Our
19
     primary tool is performing autopsies, although that's just
20
     a component of the larger sphere of what we do which we
21
     call death investigation.
              And how long have you worked as a forensic
22
     pathologist?
23
24
              My fellowship training ended in 1998, so I'm
```

1	coming up on my 20th year.		
2	Q And where do you currently work?		
3	A I am currently the chief medical examiner for		
4	Hennepin, Dakota, and Scott counties, which are in		
5	Minnesota. That's primarily Minneapolis, many of the		
6	surrounding suburbs, as well as two adjacent counties.		
7	Q And what are your responsibilities as chief medical		
8	examiner?		
9	A So I'm one of six pathologists in our office that		
LO	performs autopsies, certifies deaths, makes		
L1	identifications, and testifies in court. Because I'm the		
L2	chief medical examiner, I do have some additional		
L3	administrative responsibilities such as hiring, HR,		
L4	budget, media relations, all the things that come along		
L5	with being the director of the department.		
L6	Q And as part of your position, do you review autopsies		
L7	conducted by other pathologists in your office?		
L8	A Yes, I do.		
L9	Q And is that part of a quality assurance program?		
20	A Yes.		
21	Q How long have you had the position of chief medical		
22	examiner?		
23	A I was pointed to the position in 2004. It's a		
24	recurring appointment, so I was reappointed in 2008, 2012,		

1 and last year. 2 And prior to that initial appointment, did you hold other positions at Hennepin County medical examiner's office? 3 4 A Yes. And what were those? 5 From 2002 to 2004, I was the assistant chief 6 A 7 medical examiner in that office. And as part of that position, did you also perform 8 9 autopsies? 10 Α Yes. 11 Before joining that office, where did you work? I was a medical examiner for the department of 12 defense from 1998 to 2002. I was a major in the United 13 States Air Force and I was assigned to an institute known 14 15 as the Armed Forces Institute of Pathology. 16 institute does not exist anymore. I believe it went away 17 when Walter Meade Army Medical Center went away. However, 18 the division that I worked in, the armed forces medical 19 examiner, still exists. 20 And as a forensic with the armed forces, what did 21 your work entail? The mission was broadly similar to what I do now 22 Α in the sense that we participated in death investigations, 23 24 we performed autopsies, we so certify deaths. Because it

was a military organization, it had a decidedly military 1 2 slant, and so I saw more bombings and plane crashes and helicopter mishaps than you would see in a civilian 3 practice. 4 Doctor, in your work on behalf of the government both 5 6 with the armed forces and Hennepin County, approximately how 7 many autopsies have you conducted personally? Personally, I don't have an exact spreadsheet. 8 I would say in the ballpark of three thousand. 9 And about how many of the three thousand autopsies 10 0 you conducted were you called out to the scene to view a body 11 in its location? 12 13 A There was a time when I was doing that 10 or 12 times a year in my office. We used to send one of our 14 15 physicians to every potential homicide scene in our 16 jurisdiction. As we grew, it just got to be too much, so 17 we don't do that anymore. But until a couple of years 18 ago, I was still going out to scenes on at last several 19 times a year. 20 And aside from your work for the government, do you 21 also do private consultation? 22 I do on my own time. And I should add, I hope Α it's obvious, I'm here today on my own time. I'm not here 23 24 as a representative of the government that I work for.

But yes, I do occasionally look at cases on my own time.

- Q And what type of cases do you work on in your private consultation?
- A Most of them actually tend to be medical malpractice or wrongful death cases, so they're not criminal. They're civil. And generally, I'm looking at an autopsy of the case and putting it into context with the clinical data to help the attorneys and the Court understand why this person died and if the autopsy findings are even right.
- Q So in that capacity, you're reviewing autopsies conducted by other pathologists?
  - A Yes.

- Q And what materials are you typically reviewing?
- A Generally, it will be the medical record, the autopsy report; the autopsy photographs; the X-rays, if any were taken; the glass slides, if any were prepared; the laboratory results. Depending on the nature of the case, I may need things like the police report and the fire or emergency medical services run sheet because many of these cases involve somebody who is, you know, unresponsive or in extremis at home and taken to a hospital before they died.

It varies a little from case to case, but that's

kind of the gamut.

Q And you mention that you personally conducted approximately a ballpark figure of three thousand autopsies. In terms of your work for the government and your private consulting, approximately how many autopsies of other pathologists have you subsequently reviewed?

A Again, I don't have an exact number, but it would be in the many hundreds. One of the primary things we did during my stint in the military was review everyday autopsies of deceased service members who may have, say, died in a civilian jurisdiction or died in a location that wasn't under our control. And so sort of as a quality assurance major for the military, we would review that work.

In my current practice, getting back to the quality assurance that you mentioned earlier, in my office, every case that is going to be certified as a homicide or involves the death of a child or involves law enforcement in any capacity is automatically reviewed by a second pathologist in my office. So not only do I review my peers' work but they review my work.

Q Dr. Baker, can you briefly describe for the Court your education and training in pathology?

A Sure. I'll go back to undergrad. I received my

undergraduate degree from the University of Iowa in 1988. I received my medical degree, my MD, from the University of Iowa College of Medicine in 1992. From 1992 through 1997, I was a resident at the University of Iowa hospitals and clinics, where I completed my training and anatomic and clinic pathology. And then in 1997, I moved to Minneapolis where I completed a one-year fellowship in forensic pathology.

- O And are you licensed to practice medicine?
- 10 A Yes, I am.
  - Q Are you board-certified in forensic pathology?
- 12 A Yes.

Q And what does it mean to be board-certified?

A So I'm board-certified in anatomic and clinic and forensic pathology. To be forensic pathology certified, you have to get the other two first, the basic anatomic and clinical pathology. Every medical specialty in the US that I'm aware of has an independent certifying board that is part of the American Board of Medical Specialists. So my board is the American Board of Pathology, and they require, for example, graduation from an accredited medical school, preliminary examination of accredited residency program, letters of recommendation, and I would say for most people they would say the hardest part about

1 getting board-certified is taking the board examination 2 and passing it. And you mentioned that board certification is from 3 the American Board of Pathology? 4 5 Α Correct. Are there other entities that provide certification 6 7 for forensic pathologists in the United States? I'm peripherally aware of other organizations 8 9 that provide something that's marketed as certification. 10 The only thing that my professional organization 11 recognizes is certification by the American Board of Pathology or on international equivalent. 12 13 Are you -- you mentioned your professional 0 14 organization. What were you referring to? 15 Oh, I'm sorry. That's the National Association 16 of Medical Examiners. We can just call it NAME for short. 17 And what is NAME? Q 18 NAME is the professional organization that represents medical examiners, coroners, medical examiner 19 20 investigators, and allied specialists that we occasionally 21 work with. I believe we have about 8- or 900 total members. I don't recall the number specifically. We're 22 certainly not a huge organization because it's a rare 23 specialty. 24

But some of the activity we do is we have a board of directors. We have elected officers who are allowed to speak for the organization. We have an annual scientific meeting that we put on. We have an annual interim meeting that's about six months away from the annual scientific meeting. We also sponsor a journal, like many medical societies would.

- Q And do you hold any positions within NAME?
- A I do.

- Q And what is that?
- A The current position that I hold is that I am the chair of the standards committee.
  - O And what does that entail?

A So NAME has a published set of forensic autopsy performance standards. This is what the membership has voted constitute the minimum requirements as to who gets an autopsy and what should be contained in that individual's autopsy report.

The standards are subject to change. And as the chair of the committee, I am the person that receives those proposed changes, works them through my committee, presents them to the membership at an annual scientific meeting, and then they would get voted upon to be included or not included in the standards.

1	Q Have you held any other leadership positions within
2	NAME?
3	A Yes, I have.
4	Q What are some of those positions?
5	A I was previously on the board of directors for
6	several years. I did get elected to be the president of
7	NAME. If memory serves, I was the president of the
8	organization in 2012. And following that, I was the chair
9	of the board of directors in 2013.
10	Q Were you also a member of NAME's Committee on Medical
11	Examiner Independence?
12	A Yes. There was a year where I was on the
13	Independence Committee as well.
14	Q And what was that?
15	A So independence has always been an important
16	issue for medical examiners. And when we say
17	independence, we mean independent from law enforcement
18	agencies or any prosecutor's office. It's very important
19	that death investigation is done from a medical mind sight
20	in parallel with law enforcement rather than under the
21	control of law enforcement or a prosecutor's office. That
22	way, we can offer the most unbiased investigations
23	possible without undue influence from outside agencies.
24	Q Are you a member of any other professional

1	associations?		
2	A Yes.		
3	Q And what are those?		
4	A The two other initial organizations I'm part of		
5	are College of American Pathologists and the American		
6	Academy of Forensic Sciences.		
7	Q Is the American Academy of Forensic Sciences also		
8	referred to as AAFS?		
9	A Yes.		
10	Q Okay. And can you describe for the Court how AAFS is		
11	organized? Is it split into sections?		
12	A So AAFS has thousands of members representing, I		
13	believe at last count, it was about 11 different sections.		
14	So for example, there is a section just on criminalistics.		
15	There is a section just on anthropology. There is a		
16	section just on toxicology. So when you join the		
17	organization, you become part of the section which is your		
18	specialty.		
19	I'm part of the pathology/biology section, which		
20	has about 800 members. Most of the members are		
21	pathologists like me, but the biology part of that section		
22	includes some of the other specialties that really aren't		
23	great fits for other sections. Examples would be forensic		
24	entomology or forensic botany or even forensic		

1 microbiology is becoming -- is up and coming. 2 And how long have you been a member of AAFS? I believe I joined AAFS the year I was a fellow 3 in 1997 back in Minneapolis. So it would be 20 years, 4 5 give or take a year. Have you had any leadership roles within that 6 7 organization? Yes, I have. 8 Α 9 And what are some of those roles? I have served as the scientific program chair, 10 11 the secretary, and the section chair for the pathology/biology section. I have chaired the continuing 12 13 the education committee for the entire academy -- boy, probably six or seven years now, at least. Last year, I 14 15 was elected to the board of directors of the organization to represent the pathology section to the whole 16 17 organization. And the board of directors elected me to be 18 on the executive committee, which is a subset of the board 19 of directors that meets more frequently. 20 And have you ever given any presentations at AAFS? 21 Α Yes. 22 And on what subjects? 0 I have presented everything from gunshot wounds 23 Α 24 to child abuse to work that I've done in Kosovo to issues

of cognitive bias in the forensic sciences. 1 2 And are these at the annual meetings? Those have all been at the annual meeting, yes. 3 Α 4 And are those meetings open to the public or who Q 5 attends? I don't know actually know if they're open to the 6 A 7 I believe you have to be a paid attendee to get public. in the door because everything is scanned and controlled 8 9 by badges and barcodes and stuff. I don't think there's anything that would stop a member of the general public 10 11 from coming if they wanted to pay, you know, the admission fee and stuff. But to --12 13 So you would have to register? Correct. You would have to register and pay the 14 Α 15 admission fee to come. 16 Dr. Baker, do you serve on any committees with the 17 National Institute of Standards and Technology? 18 Α I do. Is this also referred to as NIST? 19 0 20 Α Yes. 21 And what is NIST? 0 22 Well, I certainly can presume to speak for NIST Α because it's a huge federal organization that is involved 23 24 in all areas of science and technology and standing --

1 setting standards. Several years ago, NIST took an interest the standard setting and the metrics in the 2 3 forensic science and set up a very large umbrella organization known as the organization of scientific area 4 committees to look at all the different forensic 5 disciplines. 6 7 For three years, I was NAME's representative to the governing board of that entire enterprise. 8 9 known at forensic science standards board. 10 After that three-year stint was up, I asked to be 11 placed on a different committee. So I'm now on the 12 medical-legal death investigations subcommittee. It's the level in the organization where I think I work best 13 because it's the area where I'm kind of a subject matter 14 15 expert. 16 And so is it fair to say that this is a US government 17 organization that sets out to create standards in forensic 18 science? 19 I don't know that I'd say it's the government 20 that's doing it. Most everybody who is part of the 21 organization does not work for the federal government, but we're on the committees as subject matters experts. But 22 23 we certainly are getting the funding through -- to do this 24 through the federal government.

1 0 And are you also part of a group called DMORT? 2 I was in the past. A And what is that? 3 0 4 A DMORT is the federal Disaster Mortuary Operational Response Team. Every FEMA region in the 5 6 country has a DMORT team that consists of pathologists 7 like me, anthropologists, forensic dentists, other specialists -- and funeral directors, I should add, who 8 9 are trained and respond to the scenes of mass fatalities 10 and assist the local medical examiner or coroner in deal 11 with those. I was on DMORT for six years ending in 2009. 12 13 only deployment other than some training was I did deploy 14 to New Orleans following Hurricane Katrina. And I did 15 spend three weeks in a mass disaster morque, assisting in 16 the processing and identification of human remains. 17 Dr. Baker, did you conduct trainings for other 18 pathologists? I do a lot of teaching, if that's what you 19 20 mean -- or maybe you're talking about a different 21 environment. I don't want to --22 Have you been invited or participated as a quest 0 faculty for medical associations of other states? 23 24 Α Oh, yes. I'm sorry. I misunderstood your

question.

Yes. I've been to several other states as the invited guest speaker, for example, a state-wide coroner's and medical examiners association meeting. Off the top of my head, I've done that in Iowa, Ohio, Michigan, and Florida, that I can recall. I've also been invited to teach in other countries and give keynote lectures or invited guest speakerships to other pathologists there as well.

- Q Have you also conducted training in the area of forensic pathology for law enforcement?
  - A Yes.
- Q And which agencies to name a few have you conducted trainings for?
  - A I've done training for the FBI in Minnesota.

    I've done training for the Minneapolis police department.

    A lot of these I don't even put them on my curriculum vitae because they're just sort of routine things that we do over and over.

For example, my office participates in training of law enforcement throughout the metropolitan twin cities on an annual basis in our state crime lab. And then we even bring officers into our morgue, not for cases they're investigating but to teach them what we do and how to work

1 with medical examiners and the sorts of things that they 2 can learn from an autopsy. So I teach law enforcement at multiple levels. A 3 4 lot of it wouldn't even be on my CV. Have you also conducted trainings for the National 5 District Attorneys Association? 6 7 Yes, I believe I have. And have you also been invited to present to judges 8 9 on the area of forensic pathology? 10 Α Yes. 11 Dr. Baker, you previously served on the board of directors on the Minnesota Innocence Project; is that right? 12 13 A That is correct. And that's not related in any way to the innocence 14 15 project in New York? It -- is that a question? Because I don't 16 17 actually know the answer. 18 0 All right. 19 I mean, as far as I know, it's not. It's autonomous, but I'm not a hundred percent sure of that. 20 21 Prior to your work in this case, have you had any 22 case work contact with the innocence project of New York? No, I have not. 23 Α 24 Aside from yourself, what other types of

1 professionals served on the board of the Minnesota Innocence 2 Project? My recollection at the time was we had a forensic 3 4 scientist from our state crime laboratory. We may have had a forensic anthropologist. I don't specifically 5 6 recall. There was several attorneys on the board, some 7 from some very high-powered law firms in the twin cities 8 area. 9 Dr. Baker, you also serve on the American Board of Pathology Test Development and Advisory Committee? 10 11 I did serve on that until I believe 2013. I was 12 on that for six or seven years. 13 And what was that? So the board certification we talked about 14 15 earlier, the board that I had to pass later on in my career I was invited by the board be on the committee that 16 17 writes the test questions for the forensic pathology 18 boards. 19 And have you been involved in the training of fellows 20 in forensic pathology? 21 Α Yes. 22 Are you also an assistant professor? 0 Yes, at the University of Minnesota. 23 Α 24 And what subject matter do you teach? Q

1	А	It's exclusively pathology and forensic pathology	
2	and it w	ould be just at the medical student level and	
3	above.	It wouldn't involve undergraduates.	
4	Q	Dr. Baker, have you published any articles in the	
5	field of	forensic pathology?	
6	А	Yes, I have.	
7	Q	Approximately how many?	
8	А	Probably somewhere between 20 and 25.	
9	Q	And are these in the field of forensic pathology?	
10	А	Yes.	
11	Q	And were these in peer-review journals?	
12	А	Virtually all of them in peer-review journals,	
13	yes.		
14	Q	And what does that mean, to be a peer-reviewed	
15	journal?		
16	А	So when you submit a paper to a peer-review	
17	journal,	it's called a draft or a manuscript. And it's	
18	sent out	to your colleagues in the field who review your	
19	work, double-check your results. They can critique the		
20	draft. They can send it back to you and demand revisions.		
21	They can tell the editor of the journal point blank, this		
22	isn't good enough for this journal. We reject it.		
23	There's a variety of different ways they can respond.		
24	Typicall	y, you respond to their proposed revisions. And	

after several iterations, if you're fortunate, the paper 1 2 is accepted. And then it's published in the journal. Dr. Baker, have you been qualified to testify as an 3 expert in forensic pathology? 4 Yes, I have. 5 Α About how many times? 6 7 I will have to give you an estimate because in my day job, it's routine for the shootings and stabbings and 8 9 strangulation cases I get involved in. But I would say scores of times, 80, hundred, ballpark. 10 11 And in which states? Virtually all of those would have been in the 12 13 state of Minnesota because of my current practice. When I was in the military, I did testify in court marshals. I 14 don't remember all the states I would have been in, but 15 16 there were a few. 17 Hold on one moment, Dr. Baker. 18 Dr. Baker, I'm showing you a copy of what's been 19 marked as Defendant's Exhibit 1. Do you recognize that? 20 Α I do. 21 And what is that? 0 22 This is a copy of my curriculum vitae as of March Α of this year. I may have added a publication or a couple 23 24 of speeches but nothing of substance would have changed

1 since then. 2 Aside from those changes, does it accurately reflect your education, training, and experience in the field of 3 forensic pathology? 4 Yes, it does. 5 6 Okay. Thank you. MS. POTKIN: I would move to admit the CV as 7 Defendant's Exhibit 1. 8 9 MS. DIGIACOMO: We'll object, your Honor. He's already testified to everything and it's duplicitous. 10 11 THE COURT: I'll allow it in. It will be admitted. [DEFENDANT'S EXHIBIT A ADMITTED.] 12 13 MS. POTKIN: At this time, I'd like to proffer Dr. Baker as an expert in forensic pathology. 14 15 THE COURT: All right. Any objection by the State? MS. DIGIACOMO: No, but we don't do that in this 16 17 state, but I'll submit it. 18 THE COURT: He'll be so qualified. 19 MS. POTKIN: Thank you. 20 BY MS. POTKIN: 21 Dr. Baker, we're going to speak about this in greater Q 22 daily. 23 MS. POTKIN: I'm not quite clear for the record 24 actually if Dr. Baker's report, which we have marked as

1 Exhibit Number 2 has already been admitted into evidence. 2 You previously --3 MS. DIGIACOMO: Just the timeline. MS. POTKIN: Just the timeline. Okay. 4 BY MS. POTKIN: 5 So Dr. Baker, we're going to talk about your opinions 6 7 and conclusions in greater daily. But did you offer an expert opinion regarding time of death in this case? 8 9 A I did. And is your opinion documented in a letter report --10 11 report? 12 Α Yes. 13 I'm showing you what's been marked as Defendant's Q Exhibit 2. Do you recognize that document? 14 15 A I do. 16 And what is it? 17 Α This is a six-page consultative report -- excuse 18 me -- that I addressed to you in March of this year. 19 Q And is your signature at the bottom of this report? 20 Α It is. 21 Does the report accurately and correctly reflect your Q opinion in this case? 22 23 Α Yes. 24 MS. POTKIN: I would move to admit Defendant's Exhibit

1 2 into evidence. 2 THE COURT: Any objections? MS. DIGIACOMO: Objection. It's hearsay. He's here 3 4 to testify to what it says. THE COURT: Overruled. It will be admitted. 5 [DEFENDANT'S EXHIBIT B ADMITTED.] 6 7 BY MS. POTKIN: Dr. Baker, I'd like to start off talking about time 8 9 of death in general. How do forensic pathologists typically estimate time of death? 10 11 There are four biological clues that we use to Α estimate time of death. And I want to emphasize the use 12 of the word estimate because this is not an exact science. 13 Those four clues are how fast the body is 14 15 cooling. The technical term for that is algor mortis. 16 Whether the blood in the body is pooled in place after 17 death and whether it's fixed in place or not. That's 18 called livor mortis. And whether the muscles have become 19 locked or stiffened if place or whether they can still be 20 moved. And that locking in place is known as rigor 21 mortis. There is a fourth biological clue that is not often used, not talked about as much, but that is the 22 contents of the deceased individual's stomach because 23 24 sometimes that might tell you approximately when they last

ate or possibly what they last ate.

But the three things you'll generally hear talked about are the cooling of the body, the cooling of the blood, and the stiffening of the muscles.

Q Dr. Baker, I wanted to speak a little more specifically -- or have you speak a little more specifically about rigor mortis, which you just mentioned.

I put up an image on the screen. Do you recognize this image?

A I do.

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Q And what is it?

A That's an image I pulled from a physiology textbook just to illustrate for the reader of my reports what I was talking about when I used words like actin and myosin and chemicals sliding back and forth over each other to make muscles contract. This is really just that particular textbook's way of illustrating this.

- Q And this is the process of rigor mortis?
- 19 A This sets up a way to describe the process of the 20 rigor mortis. Once you have this image in your head, then 21 I can explain it.
  - Q Could you do that, please?
- 23 A Yeah. So what you see in this image is 24 molecules, very complex proteins known as actin and myosin

and in your muscle cells, they slide back and forth over each other like this. And at the microscopic level, that's what allows you to do this with your arms and bend your legs and move.

There is a chemical known -- the abbreviation is ATP. It's an energy form that muscle cells use. And that chemical is required to allow those bridges to break so that muscle can move again. Okay? So if you picture your muscles doing this at the microscopic level, really at the molecular level, that's what you're seeing on the screen.

So when you die, the muscles start to acidify. Acid builds up in the muscles. The ATP that allows this process to take place is depleted and those muscles lock in place where those actin and myosin are sitting on top of each other and they get stuck there.

Now, typically it takes hours for that process to develop. And then they'll be locked in place for hours more. And then as the chemicals start to break down on the other end of that curve of time, the body becomes flaccid. So there is a period of time where rigor goes up and then the body is in a full body rigor mortis and then that rigor mortis will go down.

Like all chemical phenomena, this is subject to many variables. The most important one is temperature.

As a general rule, chemical reactions will happen faster when it's hot and slower when it's cold.

- Q So, Doctor, I am now putting on the screen an image.

  Do you recognize this image?
  - A I do.

Q And what is this?

A This is just a very simple example I put together myself on my computer illustrating the two different curves of rigor mortis taking place over a period of time. Let's just say the blue curve is under normal conditions. So a room like this with normal humidity, 68 degrees room temperature, wearing normal clothes, a body in this room would go into rigor fitting that blue curve right there.

And we can talk about what the time frame of that blue curve might be later. But the point of this illustration is that the orange curve, all other things being equal, represents that same body but in a much warmer environment, like outside on a very hot summer day or evening where is may be in the 80s or 90s, much warmer than it is in here. Under those conditions, a body will two into rigor much more quickly, stay in rigor for a shorter period of time, and then come out of rigor mortis more -- even more quickly.

And so everything gets shifted to the right and

1 so you get a much more -- shorter postmortem interval based on the observation you've made of that body simply 2 3 because it's so hot. So you mentioned timetables. If we take first the 4 5 blue bell curve, which I think you testified is the, you know, normal process of rigor, could you walk us through how long it 6 7 typically takes from time of death for rigor to develop? So you would probably get different answers from 8 9 different authors or textbooks you consulted. We'll --10 I'll -- we'll just pick the one that most forensic 11 pathologists would recognize. I think most attorneys would recognize. It's Spitz and Fisher. It's a fairly 12 13 typical textbook in your field. 14 So the author of that chapter would say that the first third of this curve takes about 12 hours. So rigor 15 16 is developing over the course of 12 hours. And is going 17 to be fully developed for about another 12 hours. Then 18 it's going to come out of rigor during another 12 hours. 19 To the whole length of that curve -- and again, 20 these are estimates -- would be about 36 hours. 21 And so just so I understand you, it would take 36 hours from the time of death for rigor to develop to someday 22 23 for the period of time it stays and then for it to dissipate? 24 For a typical example on average, yes.

Q Okay. Typical?

A In normal temperatures like we're in right now.

Q And you mentioned that that process which typically takes approximately 36 hours can be accelerated by a hot environment?

A Yes.

O And how is that?

A Again, the chemical reactions that I talked about earlier like virtually all chemical reactions, they're going to go faster when you heat them up. And they're going to go slower when you cool them down. So if you take a typical body and put it in a 80, 90, warmer degree environment, it's -- that reaction is going to take place faster. So that body goes into rigor more quickly, stays in rigor for a shorter period of time, falls out of rigor more quickly.

Just to give you an example, and I believe I cited this is my letter to you, in the Spitz book, the author mentions that that entire process could take place in only nine or ten hours in a warm enough environment. I mean, that's how differently those curves could really be shifted.

Q So a process that normally takes 36 hours in an environment where the heat is 80 to 90 degrees can take as

little as nine hours?

A So 80 to 90 degrees wouldn't be the normal environment. Take the room temperature environment, convert that to a much hotter environment, and yes, you could shift from a window in a ballpark of 36 hours to a window in the ballpark of only ten or so hours.

Q And for to have a window of ten or so hours, you are talking about temperatures of what? Just to be clear.

A Well, there is no way to answer that exactly because of course, this is not something we can study in the laboratory. You know, take hundred dollars of cadavers and put them in, you know, 90-degree environments and measure what happens. But certainly authors in the field, again, like Spitz in that particular chapter of anecdotally noted, that in hot environments they've seen bodies go in and out of rigor in nine or ten hours.

Q Aside from the heat, what can affect how quickly rigor develops and leaves?

A So other factors would be how much clothing the person is wearing. Because if a body is very heavily clothed, it's going to retain more heat. So the effect would be faster. The temperature of the person's body when they die can affect how quickly they go into rigor. We all assume that normal body temperature is 98.6

degrees. It actually varies a little bit throughout the day. If you have known a fever and then you were to die, you could go into rigor mortis more quickly. If you were involved in a struggle and exerting yourself right before you die, you can go into rigor mortis more quickly.

And there's a couple of reasons for that. One is that your body temperature just goes up as a function of exercise. But you also develop acid in your muscles as a function of exercise. If you've been running and gotten a cramp, then you know exactly what that acid in your muscle feels like.

So those two things will also accelerate rigor.

So there's many variables that go into interpreting where you are on one of these curves and how long that curve is. And I should add one variable. That we -- known of us can control and that is also a subjective assessment. I mean, a living individual presumably trained as a death investigator is examining a dead body and commenting on the degree of that dead body's rigor mortis. And that might be different than someone else's observation.

Q And you referred, you know, a few minutes ago to Spitz and Fisher. Would it be fair to say that Spitz and Fisher provides a broad overview of forensic pathology?

A Yes.

1 0 Would you consider is a reliable authority on issues of time of death? 2 3 Α Yes. Would it be a good place to start if one wanted to 4 Q become familiar with methods that are used to establish a time 5 of death? Is it a resource? 6 7 Α Yes. Do you know when it was first published? 8 I don't know honestly when the first edition came 9 It was probably before my time. I believe the 10 11 fourth edition came out in 2005. The fourth edition? 12 The fourth edition came out in 2005. I'd 13 A have to double-check that, but I believe that's when it 14 15 was published. 16 I'm sorry. I didn't hear you. 17 I'd have to double-check, but 2005 comes to mind. 18 0 Aside from the postmortem changes that you've 19 discussed of rigor mortis and the other features, what other 20 data leads you to form a time of death estimate? 21 So the four things that I just talked about -livor, rigor, algor, and in some cases stomach contents --22 23 are really the four things that forensic pathologists use. 24 When you get into longer time of death intervals where

1 temperature isn't an issue because the person has been so 2 long, they're at ambient -- been dead so long, they're at ambient temperature, where they've been dead so long that 3 rigor has long since passed. There are other forensic 4 5 disciplines that can be brought to bear. The two that we 6 generally give are forensic entomology, which is the use 7 of insects to try to inform the time of death. And in even more extreme cases where you start getting into 8 9 bodies that are terribly decomposed or even skeletonized, 10 you can consult a forensic anthropologist, somebody who 11 specializes in bones and skeletonized bodies. And you testified, you know, that Spitz and Fisher is 12 13 a reference book on death investigations. To your knowledge 14 does is discuss the role of entomology and decomposition and time of death determinations? 15 16 There is either a chapter or a section in 17 the time of death chapter specifically on forensic 18 entomology. 19 Dr. Baker, I'm showing you what's been marked as 20 Defense Exhibit 7. Do you recognize that? 21 Yes, I do. Α And what is it? 22 0 This is a very lengthy excerpt from the Spitz and 23 Α 24 Fisher book talking about the various aspects of the time

of death and changes after death. 1 2 And does it also include the discussion of entomology in time of death determinations? 3 4 Yes, it does. Sorry. It took me a while to get 5 to the page. 6 Thank you. 7 MS. POTKIN: I would move to admit Defense Exhibit 7 into evidence. 8 9 MS. DIGIACOMO: And, your Honor, with all due respect to counsel, I was not noticed of this. I have not been 10 11 provided this before we started today. So I would just ask if I could compare what they made me of a copy of with 12 13 the book and revisit it again tomorrow since I didn't get 14 it until after we started. MS. POTKIN: That's fine. The book was cited in his 15 16 report. 17 MS. DIGIACOMO: I understand it was cited. But it 18 wasn't -- a copy wasn't provided to me and I just haven't 19 had -- I just want to make sure that they're not leaving 20 anything out or et cetera. 21 THE COURT: That's fine. 22 THE CLERK: And actually, that will be Exhibit G. All the exhibits are A through --23 MS. POTKIN: Got it. 24

1 THE CLERK: Letters. So it's A and B that has been 2 admitted so far. 3 MS. POTKIN: Thank you. BY MS. POTKIN: 4 5 Dr. Baker, aside from entomology, are there other forensic disciplines that are helpful in determining time of 6 7 death? Again, the only other one that I mentioned was 8 forensic anthropology, which is the PhD skeletal experts 9 10 in human button anatomy that can sometimes be useful. 11 Those are the typical ones that forensic pathologists would consult. And again, those are almost always cases 12 13 where rigor and temperature and all those other things are 14 no longer useful because the body is in a state of 15 decomposition where you either have insects or 16 skeletonization or both. 17 An so it's fair to say that entomology would be one 18 of the few forensic disciplines aside from pathology that can inform time of death? 19 20 Α Yes. 21 In your medical examiners' office, have you consulted with forensic entomologists? 22 I have, but it's a very exceptional 23 24 circumstantial where we actually need to bring one in.

Q And do you have a forensic entomologist that's identified that pathologists in your office can call if one of those circumstances arises?

A Yes. We do have the contact information for a forgotten entomologist in Minnesota. And my investigation supervisor or any physicians would know how to get a hold of her if we needed. But again, it's a -- generally a pretty rare circumstantial in most medical examiners' medical offices that you would need them.

Q And is it generally the circumstantial that time of death is not the major issue that you are dealing with?

A Correct. In most of the cases that medical examiners deal with, time of death is not an issue.

Certainly not for legal purposes. Oftentimes, families, when their loved one has died purely of natural causes are interested in knowing how long the person may have been dead before they found them. But that's a very different discussion than how we would talk about it in the court of law.

The only thing I would submit to you is only a tiny fraction of what medical examiners even deal with are homicide cases. The overwhelming majority of our case load is natural deaths and car crashes and drug overdoses. So, you know, the Venn diagram of homicides and the Venn

1 diagram of cases where you need an entomologist, the 2 overlap is very small. And while it's small, in that small group of cases, 3 it can be informative? 4 5 Α Correct. Earlier you discussed your involvement in the 6 7 American Academy of Forensic Sciences. Is there a section within AAFS for entomology? 8 There is. We put the entomologists in the 9 Α pathology/biology section with us medical examiners. 10 11 And through AAFS, have you listened to presentations by entomologists? 12 I have. 13 A Do you know if -- you know, we talked about earlier 14 15 if you want to go to one of the AFS meetings, you have to pay 16 a register fee, but do you know if lawyers attend AFS 17 meetings? 18 Not only do they attend but they actually have a section at the AFS. There is a jurisprudence section. 19 20 Dr. Baker, are you familiar with Dr. Jeffrey 21 Tomberlin? 22 Α I am. And do you know him through AFS? 23 0 24 Α I do.

1	Q Okay. Are you familiar with any of his research?
2	A I have certainly seen his graduate students
3	present on his research and seen him do it himself. It
4	would be less than truthful for me to say that I
5	understand all of it because he is an incredibly smart
6	guy. And when he starts spewing out names of lyes in
7	Latin, a lot of it is over my head. But he has he has
8	mentored many people in the field, and I watched him do it
9	through the academy over the years.
LO	Q In your work as a forensic pathologist, have you seen
L1	fly eggs on a dead body, either at a crime scene or some a
L2	body that was brought in to you, your office for an autopsy?
L3	A More typically I would have seen them in the
L4	autopsy room as opposed to a crime scene, but yes, I've
L5	seen them.
L6	Q And have you seen fly eggs on dead bodies in person
L7	as well as in photos or
L8	A Yes. I've seen them in person as I'm about to
L9	start a postmortem examination.
20	Q Dr. Baker, what happens to fly eggs when they hatch?
21	MS. DIGIACOMO: Objection. It's outside of his scope
22	of expertise.
23	THE COURT: Well, can you lay a foundation for the
24	question.

1 BY MS. POTKIN: 2 Dr. Baker, have you ever observed maggots on dead 3 bodies? 4 Α Many times. 5 And where do these maggots come from? 6 They're the larvae from the fly eggs. A 7 Okay. Going back to fly colonization -- just give me one second to make this a little bit bigger. Can you --8 9 MS. DIGIACOMO: I'm sorry. Can we just make a record of what exhibit number this is and what the last one was? 10 11 MS. POTKIN: I was going to ask if -- if he 12 recognized, but this is page 113. 13 MS. DIGIACOMO: No, no. I'm asking what the clerk's exhibit for the record, what has been marked. 14 15 MS. POTKIN: G. This is part of Exhibit G. MS. DIGIACOMO: The whole thing is G. Okay. 16 17 you. 18 MS. POTKIN: Yeah. So this is page 113 of Exhibit G. 19 MS. DIGIACOMO: Thank you. 20 MS. POTKIN: Which is the third chapter of Spitz and 21 Fisher. BY MS. POTKIN: 22 Dr. Baker, can you describe what's depicted in this 23 0 24 photo?

1 Α Sure. I mean, those are fly eggs on a body. And I'm going to show one -- do you recognize 2 Okav. the source of this photograph? We talked about it a bit 3 4 but --Yeah. It's from -- from the Spitz textbook that 5 we've been discussing. 6 7 Okay. And this is the chapter on time of death and 8 can changes? 9 MS. DIGIACOMO: And I'm sorry. This is page 114, just for the record. We looked at the wrong page. 10 11 MS. POTKIN: Oh, okay. 12 BY MS. POTKIN: 13 So that was page 114. Here is page 113. Dr. Baker, Q with regard to the image that's on the left of the scene, the 14 15 single photo on the left, could you describe -- do you know 16 what's depicted in this picture on the left? 17 MS. DIGIACOMO: And, your Honor, I'm sorry. She is 18 publishing something that's not been admitted into 19 evidence yet. So I'd just like to make my record of that. 20 THE COURT: Is this part of the packet that you want 21 to look at for tomorrow. 22 MS. DIGIACOMO: It is part of the packet, yeah. here. How about this? Let's just admit it conditionally 23 24 as long as I can just verify that nothing is missing.

1 THE COURT: Okay. That would be procedurally better. 2 MS. DIGIACOMO: Thank you. 3 MS. POTKIN: Thank you. BY MS. POTKIN: 4 5 Dr. Baker, what's being depicted in this photograph? 6 So those are also fly eggs. A 7 And where do you see any eggs, if you could just point them out? 8 9 Do I have a pointer. 10 0 I --THE COURT: You can touch the screen. 11 12 BY MS. POTKIN: 13 An imaginary pointer. MS. DIGIACOMO: I have a laser pointer if you want 14 15 it. THE WITNESS: Oh, wow. Oh, shoot. Every time --16 17 well, so there's fly eggs on the eyes here and in one of 18 the nostrils and around the mouth, particularly at the 19 corners right there. They're the tiny white things you 20 Those are actually groups of eggs. I mean, each one 21 of those eggs is a tiny little thing, no more than a 22 couple millimeters. So those are little clusters. BY MS. POTKIN: 23 24 And Dr. Baker, would you expect --

1 MR. SCHECK: Can you print that here? 2 What do you want me to do with it? THE COURT: MS. POTKIN: With his circles. 3 4 MS. DIGIACOMO: No, you can't print it. You have to 5 make a record of what he circled. THE COURT: So the record will reflect there's a 6 7 photograph of looks like a person and there are circles made around the eyes, both eyes, left and right, around 8 9 the -- looks like the right nostril as well as the entire 10 mouth. 11 MS. DIGIACOMO: And it's the top left photograph on 12 page 113. 13 THE COURT: Okay? MS. POTKIN: 14 Yes. 15 BY MS. POTKIN: Dr. Baker, would you expect a competent pathologist 16 17 to be able to recognize why colonization during an autopsy? 18 Α Yes. 19 And would you expect a competent pathologist to be able to recognize the fly colonization was present from 20 21 examining photographs of an autopsy? 22 Α If the photographs are good enough, yes. 23 Is it part of a pathologist's general training to be 24 able to recognize flies and fly eggs and maggots?

1	A No, but nobody could miss maggots. Trust me on
2	that. I would assume that any competent pathologist who
3	saw fly eggs on a body would record that in his or her
4	report and/or photographically. Certain in my training
5	program if a body had fly eggs and my fellow neglected to
6	put that in her report, we would be editing that and
7	making sure it got in.
8	Q And why why would it be important to document it
9	in a report or in photographs?
.0	A Because it's a relevant finding. I mean, it
.1	tells you something about the condition of the decedent's
.2	body. Again, time of death is almost is very rarely
.3	important, so that's not the reason we put it in. It's
.4	really just it's an objective record of what you saw.
.5	Q And your work as a forensic pathologist, have you
.6	responded to locations of dead bodies in the open environment
.7	out in the field?
.8	A I have.
.9	Q And with regard to bodies that are outside, have
20	there been cases where you've been called to a scene where
21	you it was known that death occurred shortly before you
22	arrived?
23	A Yes.
24	Q Okay. And in those circumstances, have you observed

1 flies around the dead body or on the dead body? 2 Yes. I've been to scenes where the body is A teeming with flies shortly after death. 3 Thank you. Dr. Baker, did you review the autopsy of 4 Duran Bailey in this case? 5 T did. 6 A 7 And how did you become involved? I got an E-mail or a phone call from you in 8 9 December of last year. You and I had never met before. Т did not know who you were. I believe you got my name 10 11 because --MS. DIGIACOMO: Objection. Speculation. 12 13 THE COURT: Objection. What's the objection? MS. DIGIACOMO: Speculation. He said I believe. 14 15 THE COURT: Don't speculate. THE WITNESS: So you reached out to me in December of 16 17 2016 and asked me to look at this case. 18 BY MS. POTKIN: 19 And do you recall when the innocence project asked 20 for you to look at the case what specific issues were we 21 seeking your opinion on? 22 Time of death was on the most important issue, Α the issue. 23 24 Okay. Did we also -- was part of your inquiry also

1 to assess the utility of entomology regarding time of death? 2 Α Yes. Okay. And what materials were provided to you from 3 4 the innocence project? 5 So offer the course of my review, I received the Α 6 autopsy report and the coroner's record, the autopsy 7 photographs, the death scene photographs. There were reports of two forensic entomologists as well. 8 9 Okay. And did you also receive reports of pathologists in this case, including Dr. Wetli? 10 11 Eventually, yes, I did receive a two-page report Α 12 that was authored by Dr. Wetli. 13 Okay. And did you subsequently receive a copy of 14 higher resolution autopsy and crime scene photographs? 15 The initial set I got was small and are not A Yes. as high of quality as the later sets that you were able to 16 procure and send to me. 17 18 So in terms of having the medical examiner's report 19 and the coroner's report, crime scene photos, are these 20 materials that you would typically review to and assess an 21 autopsy that was conducted by another pathologist? 22 Α Yes. Okay. Did you also receive weather data? 23 0 24 I believe I actually got the weather data myself Α

1 from the national weather service as I began looking at 2 the case. Okay. And why was that important to you? 3 Because time of death was an issue and because it 4 was clear that one of the few objective data points in 5 6 Mr. Bailey's assessment was a death investigator assessing 7 his rigor. I wanted to know what the outdoor temperature was at the time he was found. 8 9 Being a Midwesterner, I assumed it was hot in Las Vegas in the summer, but I needed confirmation of what 10 11 those temperatures might actually be. And you may have mentioned this before, but did you 12 also receive the reports of Dr. Anderson and Dr. O'Connor, two 13 14 entomologists? 15 A Yes. Okay. Prior to reviewing the materials to assess 16 17 time of death based upon the pathology, did you look at the 18 entomologist reports? 19 I kept the entomologist reports until last in my 20 review because I wanted to look at the things that a 21 pathologist would look at first and see how that might inform my opinion and then see what someone else from a 22 23 different discipline, what lens they might look at it 24 through.

1	Q And why didn't you want to look at that other
2	material first?
3	A Well, at some level, you just want to avoid being
4	biased or being nudged in one direction by another or
5	another by another person even if their discipline is
6	actually different than yours.
7	Q One moment, please.
8	MS. DIGIACOMO: Can I ask what Counsel is showing
9	him?
10	MS. POTKIN: Sorry. I provided you a copy, so I have
11	just handed Dr. Baker a copy of the autopsy.
12	BY MS. POTKIN:
13	Q But Dr. Baker, do you recognize these materials?
14	A I do.
15	Q Okay. What do you have in front of you?
16	A So the largest document is the autopsy report
17	prepared by Dr. Gary Simms, who is the the medical
18	the forensic pathologist who did the postmortem
19	examination of Mr. Bailey. There is also a smaller set of
20	records which are from the coroner's office that includes
21	some coroner's notes and some toxicology results. And
22	then there is also two pages of weather data here for July
23	8th and July 9 of 2001.
24	MS. DIGIACOMO: And just for the record, what are

1 those exhibits marked as? 2 MS. POTKIN: Those exhibits -- I'm sorry. MS. DIGIACOMO: And may I approach, your Honor? I 3 have extra stuff on one of mine. I just want to say if 4 5 it's the same. 6 MS. POTKIN: Okav. 7 MS. DIGIACOMO: Thank you. Have these been marked? Is it the autopsy report? 8 THE CLERK: 9 MS. POTKIN: Yes. The autopsy report. THE CLERK: Exhibit C. 10 11 MS. POTKIN: And the coroner's report has been marked 12 as Exhibit D. 13 MS. DIGIACOMO: Yeah. I just didn't see the sticker. MS. POTKIN: The weather report has been marked as 14 15 Exhibit E and --16 THE CLERK: Those have not been admitted yet. 17 MS. POTKIN: They've just been marked. 18 THE CLERK: Right. 19 MS. POTKIN: And we have a copy of the crime scene photos that have been marked as Exhibit F as a global 20 21 exhibit. 22 THE COURT: I just need a break for the restroom. MS. POTKIN: Yes. Yes. 23 24 (PAUSE IN THE PROCEEDINGS 04:01 P.M. - 4:03

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1
         P.M.).
 2
         THE COURT: Are we ready to continue?
     BY MS. POTKIN:
 3
 4
              So Dr. Baker, the last thing I'm going to show you is
 5
     what's been marked as defense Exhibit F. Do you recognize
     that?
 6
 7
         MS. POTKIN: We have them listed out, so we just have
     to mark them. I'll describe, yes, in a list.
 8
 9
         MS. DIGIACOMO: Your Honor, I apologize, just for the
     record, I'm trying to make this more clear and I don't --
10
11
     I think we mark our exhibits differently than they
12
     normally do. Oops, sorry.
13
              So they have a huge stack of photographs they're
     going do mark collectively. But I think what we're going
14
15
     to do is mark is, like, it's going to be G, G-1, G-2, G-3.
     So -- but we're going to have to do that after court,
16
17
     obviously.
18
         MS. POTKIN: And that's fine. We have a list, an
19
     index of all the photos as well.
20
         THE COURT: Okay.
21
         MS. DIGIACOMO: Okay.
22
         THE COURT: As long as you can keep track of them.
23
         MS. POTKIN: Thank you.
24
     BY MS. POTKIN:
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1 0 Dr. Baker, if we could just -- are you still looking 2 through the photos? Do you want me to literally look at every one of 3 4 I mean, I can tell you from a high-level view, 5 these are death scene photographs and autopsy photographs. And all the ones I've looked at so far, I recognize. 6 7 You want to -- flip through. You don't have to, you 8 know. 9 THE COURT: Are you guys ready? 10 MS. POTKIN: Yes. 11 All right, Doctor, did you review THE COURT: 12 everything? 13 THE WITNESS: Again, to the extent that I could possibly look at all of these in this period of time, 14 15 these appear to be the same crime scene and autopsy 16 photographs that were previously provided to me in digital 17 form. 18 BY MS. POTKIN: 19 Q Okay. 20 I've seen these before. 21 And so you've reviewed the photographs. Just because we took a break, the other documents that you have before you, 22 23 you have a copy of what's been marked as defense Exhibit C 24 which is the autopsy report of Duran Bailey, what's been

marked at defense Exhibit D, the coroner's report, what's been 1 2 marked at defense Exhibit E, the weather report, and the 3 photos which have been marked at defense Exhibit F, which you just looked through. 4 5 Are these the materials that you reviewed and relied 6 upon in reaching your expert opinion in this case? 7 Α Yes. 8 Q Okay. MS. POTKIN: I would move to admit exhibits C through 9 F. 10 11 THE COURT: Objections? 12 MS. DIGIACOMO: No. 13 THE COURT: Admitted. [DEFENDANT'S EXHIBIT C THROUGH F ADMITTED.] 14 MS. DIGIACOMO: Other than I think we need to somehow 15 16 mark -- mark each individual photograph. THE COURT: That's -- we can do that in subsections. 17 18 THE CLERK: I guess it could be, like, F-1 through --19 we want to mark it anyway? 20 MS. POTKIN: Yes, yes. 21 THE CLERK: So put the F -- okay. I'll do that. I 22 don't know what they are right now. 23 MS. POTKIN: Would it be easier to provide the Court 24 with the binder copy instead of separate and introduce it.

1 THE COURT: It's really -- I look at her more because 2 she's responsible for making sure they get marked 3 appropriately. I can deal with whatever I'm given. 4 MS. POTKIN: Thank you. BY MS. POTKIN: 5 Dr. Baker, do you have an expert opinion as to 6 7 Mr. Bailey's most likely time of death based on typical postmortem changes used by pathologists? 8 9 A I do. And what is your expert opinion? 10 11 Based on the data that's available on this case, Α I would say the best estimate of the time that he died was 12 13 approximately eight hours before the coroners and 14 investigator examined his body at 3:50 in the morning. 15 Now, there is certainly a margin around either 16 side of that. That is not a precise answer, you know. So 17 it could be eight hours plus or minus four, five, six hours in either direction. But based upon what I know 18 19 about the case and my experience, that would be my best 20 estimate. It --21 And can you walk us through how you are arriving at that estimate? 22 I can. If I could revisit a previous question, 23 24 and I apologize. I understated my answer when you asked

me what I had reviewed. At some point I was also given transcripts of testimony that Dr. Simms had previously given, specifically as they regarded time of death. And I may have neglected to include that in my previous answer.

Q Thank you, Doctor. So how did you arrive at your expert opinion regarding Duran Bailey's time of death?

A So the primary data points available on this case were the death investigator at the scene at 3:50 in the morning -- and I'm just going to round that up to 4:00 o'clock because it makes the math easier and it's only ten minutes -- documented him to be in full body rigor mortis, I believe, were her exact words.

We also know that eight hours later that very same day when Dr. Simms started his autopsy, he reported that the rigor mortis had gone, that it was absent at the time he examined the body eight hours later.

Those two data points I believe strongly support the opinion that Mr. Bailey's time of death would be greatly accelerated -- excuse me. The onset and dissipation of his rigor would both be greatly accelerated by the heat, the fact that you've got those two points apart in time where he goes from full rigor to no rigor in only eight hours is much more consistent with that schematic orange curve that I showed you earlier rather

than a long postmortem interval.

Q Let me put the curve back up on the screen.

Now, if you're able, maybe we could -- could you -you just referred to a few different, you know, time points
that you used in your time of death estimate. Are you able to
write on the screen and --

A I think so.

Q -- walk us through those timetables that you were just discussing?

A Sure. So going back to my previous answer where I used Spitz and Fisher as an example when I said a body takes about 12 hours to go from no rigor to full rigor, will stay in full rigor for about 12 hours, and then that rigor will dissipate offer that 12 hours. That's the blue curve that you see right here.

So I'm going to circle on the blue curve that window of time where that body is in full rigor mortis.

So, you know, this is about the 12-hour mark right here.

This is going to get really crowded. And this is about the 24-hour mark right here.

Now, if -- if we believe that under standard typical room temperature, 68 degrees in normal clothing conditions that it takes about 36 hours for a body to get all the way to the far right, you can see that under

1 normal circumstances, you would expect it to take between 2 12 and 24 hours for a body to go from observable full body rigor mortis to no rigor mortis. 3 4 I hope that math makes sense. It does to me. can go point on that screen. 5 6 I know I'm a lawyer, but that math makes sense to me. 7 I think we're with you. Okay. So the thing about Mr. Bailey's 8 observations and again the observations of his body are 9 10 limited what the death investigator saw and what the 11 pathologist recorded. So I'm going to shift to my orange curve because everything moves to the right closer to the 12 13 time his body is found because it's so hot. 14 This is the full rigor mortis part of that curve right there. This is where Dr. Simms said there was no 15 16 rigor mortis here. And that distance right here in time 17 was 8 hours, from 4:00 o'clock in the morning to the time 18 Dr. Simms observed the body. So --19 THE COURT: I have a question. Okay. On the rigor 20 mortis, the environmental factors can speed up the rigor 21 mortis; correct. 22 THE WITNESS: That's correct, your Honor. THE COURT: It can also -- does is likewise speed up 23 24 from when it goes from full rigor mortis to no rigor

1 mortis? 2 THE WITNESS: Correct. THE COURT: But the environmental conditions can speed 3 4 up the entire process? 5 THE WITNESS: Correct, your Honor. It not only shifts 6 the curve to the right but it squeezes the whole curve so 7 it's narrower. THE COURT: Okay. Thank you. I'm sorry to interrupt. 8 9 THE WITNESS: And so just to finish my answer, what we have here is a case where Mr. Bailey's body is doing in 8 10 11 hours what a typical body in a typical environment would take between 12 and 24 hours to do. 12 13 So those two data points alone tell you that his rigor mortis was rapidly accelerated. And we have an 14 15 obvious answer for why that would be the case because it 16 was so warm in Las Vegas around the time that he was 17 killed. 18 BY MS. POTKIN: 19 And just to be clear, the two data points that you're 20 talking about are the observation of the coroner's 21 investigator at 3:50 or you called it 4:00 a.m. that full rigor was present and the observation 8 hours later of 22 23 Dr. Simms at autopsy that rigor was absent? 24 A Correct.

1 0 Okay. And if it takes approximately 8 hours for 2 rigor to be fully present and then fully dissipate, how long would you expect it have taken from time of death to -- for 3 4 full rigor to be present? So the left-hand side of this orange curve should 5 be more or less a mirror image of the right-hand side. 6 7 we would predict that this upslope to the full rigor would also be about 8 hours. So if you want to broaden the math 8 9 here a little bit, we've taken a time period here that 10 used to be 36 hours under typical conditions examine 11 compressed it to something that is now -- ignore that arrow -- about 16 hours long. 12 13 And so that would be a process that goes from death to full rigor to rigor being absent is taking place in the 14 15 span of 16 hours? 16 Correct. 17 Okay. And that's 16 hours from noon on July 9th; is 18 that correct? 19 Correct. That's your end point in time when Dr. Simms observes the body to have no rigor, pointing 20 backwards in time to the moment that Mr. Bailey passed 21 22 away. And that based on the accelerated presence and 23 24 absence of rigor would be approximately what time?

A Working back from noon 16 hours, so that would be midnight the night before, 8:00 p.m. the night before, approximately. I mean, again, there's a couple of hours in either direction on this. But the farther you get away from that, the rapid it becomes much less likely because these are all bell-shaped curves. They're asymptotic.

Q And you attributed the narrowing of the bell curve and the time frame to the hot environment of Las Vegas. Are there other factors in this case that could have contributed or would have contributed to a narrowing of that bell curve?

A There certainly are other factors that could have contributed to it, yes.

O And what are those?

A The primary one would be that Mr. Bailey was in a struggle for his life before he passed away. I do not know how long the events that led to his death lasted, but to the extent that there was a struggle involved and he was exerting himself, then those factors I described earlier -- his temperature going up, the acidity in his muscles going up before he died -- that would accelerate that 8 hours that we're talking about right now along with the heat and the environment.

Q And why do you say that he was in a struggle for his life?

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Well, he had numerous injuries. And he also had cuts on his forearms and his hands. The term of art that's often used in forensic pathology is defensive wounds. Under most circumstances, those indicate the person was trying to defend them self against a knife or sharp object being wielded against them. So that would be evidence that at least some form of struggle took place because you would have to be conscious to be defending yourself. Dr. Baker, I would like to discuss how your time of death estimate compares to that offered by Dr. Simms in this case. May be helpful at this point for me to put back up to the screen page two from -- Oh. Thank you. Page two from your report. Let me try to see if I can zoom in. MS. POTKIN: And this was introduced into the record as Exhibit 2 -- 2. BY MS. POTKIN: Can you explain for the Court what is the difference, if any, between your time of death estimate and that offered by Dr. Simms in this case at trial? Α I can. Okay. Would you, please? I could. So there were several times when Dr. Simms had the opportunity to testify. And I certainly

don't want my testimony to be interpreted as criticism of him. But he did give different answers at different points in time. And I don't think that's a personal failing. I think it may have represented different levels of preparation.

But in the preliminary hearing I believe at one point he said he believed the time was closer -- the time of death was closer to when Mr. Bailey was found than not. And he believed -- it was either more likely than not or more probable than not that the time of death window was less than 12 hours.

That later got expanded to estimates as far as 24

That later got expanded to estimates as far as 24 hours. But I believe in summary, you could say his testimony was that he favored 12 to 18 hours and beyond 18 hours was unlikely.

And that was one of the reasons I created this timeline. The timeline I think it completely objective. It's simply an hour-by-hour recording of the temperature and when Mr. Bailey's body was found, when the investigator observed it and what she recorded and what Dr. Simms recorded.

And then I simply put the 12 -- the 6, 12, and 18-hour marks on there for the purposes of discussion so that you could just put it on the timeline instead of

trying to do it in your head.

- Q Okay. And so when you say that Dr. Simms testified that the likely time of death was 18 hours, where would that -- where does that fall on this timeline?
- A So that is just before 10:00 a.m. on the morning of July 8, 2001. And I think -- I don't know how well it's projecting for you, but it should be in red just below the timeline.
  - Q Maybe you could just circle it or put an S for Simms.
- A Sure. This is simply me putting exactly on the timeline 18 hours prior to the coroner's investigator making her observations at 3:50 the following morning.
- Q Okay. And can you plot for us where your expert opinion falls on this timeline in terms of time of death with the accelerated rigor process?
- A I can. I'm going to count backwards in time from 4:00 a.m. So there's one, two, three, four, five, six, seven, eight. So I would -- I would put the center of my confidence curve right there, and I would -- again, I'm just going to draw a little bell-shaped curve here because this is an inexact science. So I'm going to tell you I think he died about 8 hours before the investigator observed his body, again, give or take several hours in each direction. Maybe as many as five or six.

1 0 Okay. So the coroner's observation being at 4:00 2 a.m., your time of death estimate based on rigor is 8:00 p.m. 3 plus or minus --Five or six hours in either direction. 4 5 0 Okay. Again, I want to emphasize that when you get out 6 7 to that five or six-hour mark, that is not an equivalent level of confidence to the eight-hour mark. You're 8 9 getting into more and more and more unlikely 10 because these are asymptotic curves. 11 So you would put the unlikely time of death in the 12 2:00 or 3:00 p.m. range of the afternoon? 13 Α That would be -- yes. That would really be a 14 stretch. 15 Okay. Were there any other cues that you observed from this autopsy that would suggest that Duran Bailey might 16 17 have died later in the evening of the July 8th as opposed to 18 the early morning? 19 The early morning of July 8th or July 9th. 20 July 8th? 0 Could you ask the question again? I'm sorry. 21 Α 22 Sure. Were there any other cues from the autopsy --0 you talked about arriving at your time death of estimation 23 24 through the rigor mortis process. Were there any other cues

1 as to when time of death might have occurred in this case? 2 From a pathology point of view, no. But the lack insect colonization on his body, you could also interpret 3 that as a cue. It seems kind of odd to say that something 4 that wasn't there is a cue, but it actually turns out to 5 be relevant. 6 7 We are going to get to that in a moment. You previously discussed that stomach contents can, 8 9 in certain circumstances, provide a cue as to time of death. Was there anything that you observed from Mr. Bailey's stomach 10 11 contents that could be informative? 12 Α Yes. 13 0 And what was that? Would I be allowed to refer to Dr. Simms' autopsy 14 15 report to answer that? Because I want to make sure I 16 quote him correctly. 17 Q Yes. 18 MS. DIGIACOMO: I'd just ask for the page number. 19 MS. POTKIN: One moment, please. 20 THE COURT: The doctor, when does he leave? 21 MS. POTKIN: Tomorrow. 22 THE COURT: What time? THE WITNESS: Your Honor, I was hoping to be on the 23 24 4:20 flight tomorrow afternoon, if that's feasible.

1 That's the last flight out to Minneapolis tomorrow. 2 THE COURT: So you need to be there at 2:00. We might 3 have to start a little early tomorrow because I can't go 4 after 5:00 today. 5 MS. POTKIN: Okay. Let's go till 5:00, for sure. 6 THE COURT: 7 MS. POTKIN: Okay. All right. THE WITNESS: So I believe the question was about his 8 9 stomach contents, and I do have the report in front of me. 10 I'm referring to page 8. 11 So Dr. Simms described the stomach as containing three hundred milliliters of pink brown fluid add mixed 12 13 with digesting meat and vegetable food particles. 14 So three hundred milliliters is roughly equivalent to about a 12 ounce can of soda. So that's not 15 16 a trivial amount of food that's in his stomach. 17 BY MS. POTKIN: 18 Q Okay. And what's the significance of that to you as 19 a pathologist? 20 Well, A, it means that he probably ate within 21 several hours of the time he died. It typically takes a normal adult a couple of hours to empty their stomach 22 after a meal, depending on what the meal is, how old they 23 24 are, how healthy they are, what medications they're on.

1 It's a terrible time of death clock, so I'm not 2 implying that that's particularly helpful. But the actual 3 contents intrigued me because it so specifically says meat and vegetables in the description. And I don't claim to 4 know Mr. Bailey's eating habits or what his food access 5 6 might have been, but those strike me as the sorts of 7 things one typically sees in a lunch or a dinner as opposed to a breakfast time of day. 8 9 I mean, it's a soft finding, but it is the standard that forensic pathologists do record what's in 10 the stomach in every autopsy in case it turns out to be 11 12 relevant. 13 And you described this as a cue? Q 14 Correct. 15 Dr. Baker, were you provided a copy of a 2006 letter by a pathologist by the name of Dr. Charles Wetli regarding 16 17 the Duran Bailey autopsy? 18 Α Yes. I did not become aware of it until after I 19 wrote any consultative letter to you, but I have since 20 seen it. 21 Okay. Do you recall the name of the person the letter was addressed to? 22 23 I'm sorry. I didn't even look at that. Α 24 Would is -- might is refresh your recollection if I Q

1 showed you a copy of the letter? 2 A Sure. Does that refresh your recollection as to who the 3 letter was addressed to? 4 The answer is no and simply because I never 5 bothered to look at to who it was addressed to. I was 6 7 more interested in who wrote it because Dr. Wetli is one of my peers. And I was reading it for his opinion, not so 8 9 much who he wrote it for. I apologize. That's fine. Is it your understanding that 10 11 Dr. Wetli's review was done at the question of the defense? MS. DIGIACOMO: Well, objection. Speculation. 12 THE COURT: You can testify if you know. 13 14 BY MS. POTKIN: Do you know who -- who requested Dr. Wetli to perform 15 16 a review in this case? 17 A My understanding from conversations with you 18 is --19 MS. DIGIACOMO: Objection. Hearsay. 20 THE COURT: You can testify to your knowledge. If you 21 don't know, you don't know. THE WITNESS: I have no independent knowledge of who 22 asked Dr. Wetli to do this. 23 24 BY MS. POTKIN:

1	Q What is your understanding of the purpose of		
2	Dr. Wetli's review based on his letter report?		
3	A Well, certainly the tone of the letter and the		
4	conclusion is that he was asked to make some kind of time		
5	of death estimate.		
6	Q Do you know based upon the report itself what		
7	materials were provided to Dr. Wetli?		
8	A Yes. He specifically lists them in the opening		
9	of the letter.		
10	Q With regard to autopsy photos, do you know how many		
11	autopsy or crime scene photos were provided?		
12	MS. DIGIACOMO: Objection, your Honor. This is		
13	hearsay. He's just reading from a report he said he only		
14	looked at the opinion on.		
15	THE COURT: I don't want him to speculate. If he has		
16	independent knowledge, that's different.		
17	BY MS. POTKIN:		
18	Q Dr. Baker, in terms of your ability to review the		
19	work of another pathologist, is it important to know what		
20	materials that pathologist reviewed?		
21	A Yes.		
22	Q And in this case in reviewing the work that Dr. Wetli		
23	performed in this case, did you look at the materials that he		
24	listed that he reviewed in connection with this case?		

1	A Ye	es.	
2	Q Ai	nd what is your understanding of who photographic	
3	evidence h	e reviewed?	
4	A He	e looked at a hand full of scene photographs,	
5	five. The	report does not specifically list the autopsy	
6	photographs.		
7	Q I	Q In your opinion, would five crime scene photographs	
8	be adequate	e for an assessment of time of death in a case?	
9	A I	t would depend on the nature of the case and how	
10	many photog	graphs were taken. There were voluminous	
11	photographs in this case. I have no way of knowing which		
12	five they were.		
13	Q I:	f in order to have a thorough review of an	
14	autopsy conducted by someone else and to come to a time of		
15	death determination, would it be important to see all		
16	available autopsy and crime scene photographs?		
17	A I	n my opinion, yes. I would certainly want to do	
18	that.		
19	Q 01	kay. Did Dr. Wetli preside a time of death estimate	
20	for Duran Bailey?		
21	A He	e did.	
22	Q Ai	nd do you know what that is?	
23	A I	do.	
24	Q W	hat is it?	

1	A Mr. Bailey died at approximately 10:00 a.m. on
2	July 8th, 2001, about 18 hours prior to the initial exam
3	at the death scene. He does estimate excuse me. He
4	does emphasize that that's only an estimate and the actual
5	time of death could have been a few hours before or after
6	that 10:00 a.m. estimation.
7	Q Is that more or less consistent with the opinion that
8	had been offered by Dr. Simms in this case?
9	A So actually, no, that's even, in my opinion, more
LO	an outlier than Dr. Simms. Again, if I'm paraphrasing
L1	Dr. Simms' varied testimony correctly, he generally came
L2	down on favoring 12 to 18 hours. I would just point out
L3	that that's this interval right here, which is centered in
L4	the early afternoon.
L5	Dr. Wetli says 10:00 a.m. with a couple of hours
L6	on either side. So he's actually over here.
L7	Q What is your opinion regarding the time of death
L8	estimate that Dr. Wetli arrived at?
L9	A I very much disagree with it, obviously. And I
20	think he based it on some faulty reasoning.
21	Q And when you say faulty reasoning, what are you
22	referring to?
23	A I'm referring specifically to his description of
24	the rigor mortis in the second paragraph of his letter.

Okay. And what is -- what is the issue with his 1 0 2 description of the rigor mortis in his letter? May I refer back to the letter and directly quote 3 him and explain why I disagree with that? 4 5 Q Yes. Okay. So in the very first line of the second 6 7 paragraph, Dr. Wetli writes, "Mr. Bailey's body was first examined at 3:50 on July 9th and he was noted to be in 8 9 full rigor mortis at that time." 10 Now, the time is correct. The investigator 11 didn't say full rigor mortis. She said full body rigor mortis. You can decide if that's splitting hairs. I 12 13 think it might actually be important. But --Before you go on, why would that be important? 14 Q 15 What's the difference between full rigor and full body rigor? 16 Well, full body rigor would imply that the person 17 looked at more than one body part at the scene. You know, 18 you can cursorily look at a body at a scene and simply try 19 to move the jaw, try to move the hand and go, yeah, this 20 person is in full rigor mortis. But to me full body rigor 21 mortis seems like a very compelling way to describe what 22 you are seeing. But that's actually pretty minor compared to 23 24 where I actually disagree more with Dr. Wetli. Because

later on in that same paragraph, he writes, "Hence, when Mr. Bailey was examined at 03:50, he would have been near the end of detectable rigor and therefore death would have occurred about 24 hours earlier."

So in that one paragraph in only about a three or four sentence span, he goes from full body rigor mortis to the end of detectable rigor. And attributes both of those to the exact same observation at the same points in time. And those are two very different things.

The end of verily detectable rigor is near the end of those curves that I've been drawing for you. And that investigator solidly said Mr. Bailey was in full body rigor.

Q So according to the coroner's report, at 3:50 a.m., the coroner's investigator observed full body rigor. But Dr. Wetli in his report inaccurately characterizes this as rigor was dissipating at the same moment?

A Well, he goes from full rigor to dissipating in the course of one paragraph. And he describes both of those to the same point of time at 3:50 in the morning. And what I'm telling you is that a body that's in full rigor -- and again, I'm going to quote his words -- in a body that's, quote, "near the end of detectable rigor," those are two very different things.

Q And his opinion, which is based on Duran Bailey's
body at 3:50 a.m. being near the end of detectable rigor,
those words, near the end of detectable rigor, do they
appear you know, is that something that you saw anywhere in
the coroner's report or the autopsy report of the Duran Bailey
in this case?
A No. The only two observations were what the
coroner wrote at 3:50 in the morning, the coroner
investigator, and what Dr. Simms wrote in his autopsy
report. I'm unaware of anyone else examining Mr. Bailey's
body for this purpose during that time.
Q So is it fair to say that Dr. Wetli's opinion
regarding time of death was based on a mistake or information
that is piece of inaccurate information that is not in the
record at all of Dr. Bailey's [sic] death examination?
A So I don't know if it's inaccurate information or
if it's just faulty reasoning on his part, whichever of

A So I don't know if it's inaccurate information or if it's just faulty reasoning on his part, whichever of those it is, I very much disagree with them because I think he's taking two very different descriptions and conflating them into one thing at 3:50 in the morning.

Q Well, would it be fair to say not only do you disagree but there's no documentation in Duran Bailey's autopsy report or the coroner's investigator report that rigor was dissipating at 3:50 a.m.?

1 Α Correct. Correct. And I've been provided 2 nothing to indicate it was dissipating at 3:50 or at any 3 point in time after that. And in fact, the only objection at 3:50 a.m. by the 4 coroner's investigator is that full body rigor existed at the 5 time? 6 7 Correct. Α And so Dr. Wetli's opinion is based on information 8 9 that is inconsistent with the findings of the coroner's 10 investigator? 11 I -- in my opinion, yes. Did you see any documentation to suggest that this 12 mistake was pointed out to Mr. Wetli by Ms. Lobato's counsel? 13 14 This is the only document I have relative to Dr. Wetli at all is this letter. 15 16 Dr. Baker, you previously testified that entomology 17 is additional evidence that can be used to help determine time 18 of death. In your review of the Duran Bailey's autopsy 19 examine crime scene photos, did you see any evidence of fly colonization? 20 21 A I did not. 22 Okay. In the official autopsy report that you've 0 23 discussed, was there any documentation of blowfly eggs on 24 Duran Bailey's body?

1	A No, there was not.
2	Q And would you expect there to be documentation in
3	this official autopsy report if any colonization had been
4	observed during the autopsy?
5	A Yes. And I would expect it to be in the
6	photographs as well.
7	Q Okay. And where would you expect there to be
8	notation of colonization had it existed?
9	A In the autopsy report?
10	Q Yes.
11	A So normally it will be in the one of the
12	opening sections describing the external examination of
13	the person where you're recording height, weight, hair
14	color, scars, tattoos, anything on the outside of their
15	body that's not part of evidence of injury section.
16	I have certainly autopsied decomposed bodies
17	where I actually call out the decomposition as a separate
18	section just to make it easier to dictate all of those
19	features of decomposition. But neither one of those are
20	present in Mr. Bailey's case.
21	Q Okay. I'm showing you a picture which is from
22	defense Exhibit G?
23	MS. DIGIACOMO: F.
24	BY MS. POTKIN:

Q F. It would be F-1 when they're marked. It's the first one in there. Do you recognize this photograph?

A I do.

Q Okay. And what is did go depicted in this photograph?

A So this is one of Mr. Bailey's eyes at the autopsy table. It's actually being held open with a little ophthalmic instrument that we use at pathologists to expose as much of the eye as possible. You know, this is obviously the pupil right here. This is the iris. This is the sclera and there's an awful lot of highlighting in this photograph, but this is the underside of the eyelids known as the conjunctiva. So typically when you take his photograph and when you look at a decedent's eyes, you're looking for evidence of eye injury or evidence of petechiae which are little hemorrhages you get on the conjunctiva that might indicate strangulation.

Now, none of those things are present here. The reason this photograph is relevant is that if someone were at that make the claim that Dr. Simms missed fly eggs in the eyes, it would be pretty hard to explain how that happened when he went to the trouble to pry the eyes open, hold them with a medical instrument, and take a close up photograph.

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The purpose of this photograph isn't to look for fly eggs but as a side effect, you can very clearly see that there aren't any eggs in this picture. And aside from the photograph itself, was there any corresponding documentation in Dr. Simms' autopsy report regarding this area of the body? I'd have to look at the report again to see how he described the eyes, but they definitely did not include descriptions of fly eggs. And I'm going to show you one other photograph. This comes from F-2. Do you recognize this photo here? I do. Α Okay. And what does to depict? Q This is a photograph of Mr. Simms' [sic] mouth, Α either Dr. Simms or probably someone who is assisting him is holding the lips apart so that we can see Mr. Simms' I think the photograph might be upside down, at least it is on my screen. There we go. In any event, he's showing the photograph to illustrate the injuries to Mr. Bailey's lips and/or his teeth and/or the absence of teeth because I believe tooth

injuries were part of the picture of injuries he suffered.

But again, the side effect of this photograph is that you

can't see fly eggs in this picture, and you really can't

arque that Dr. Simms could have missed them because he's 1 2 gone to the truth to stage this picture, have someone hold the mouth open, take the picture. 3 Dr. Baker, after you reviewed the autopsy in this 4 case and came to a time of death estimate as we discussed 5 6 before, did you then consider the reports of Dr. Gail Anderson 7 and Dr. Linda-Lou O'Conner? T did. 8 A 9 And these are entomologists? 10 Α Yes. 11 Okay. What were the conclusions of Dr. Anderson and 12 Dr. O'Connor? 13 To summarize their conclusions, I would say that they concluded that because Mr. Bailey did not have any 14 15 evidence fly colonization on his body, his death must have 16 occurred at approximately sunset or later because the 17 flies that would lay the eggs that are not present in 18 these photos are not active after dark. 19 Now, I don't know exactly what constitutes 20 sunset, whether it's exactly 8:01 p.m. I think one of 21 them used the term nautical sunset, which I've never heard of. But I guess that's about an hour different. 22 23 The point is that it's not an exact point in 24 time, but it's a pretty clear you cut space in time where

he had to have died after that because of the lack of 1 2 insect activity. And to your knowledge, does that have to do with the 3 inactivity of blowflies after dark? 4 5 That's my understanding is that in general they do not do what's called oviposition or egg laying 6 7 after dark. Did you also recommend that the innocence project 8 9 speak with an additional entomologist? 10 I did. Α 11 0 And who was that? That was Dr. Jeff Tomberlin. 12 13 And why did you recommend the innocence project also Q speak to Dr. Tomberlin? 14 The reason I recommended Dr. Tomberlin is because 15 I know him personally; I know him by reputation; I know 16 17 him through activities together in our professional 18 society, the American of forensic sciences. And I know 19 that he has expertise in flies because of the work that he 20 does at his university. 21 And did you subsequently learn about their -- or to your knowledge did Dr. Tomberlin review -- subsequently review 22 the materials in this case? 23 24 A He did.

1	Q And did you learn of Dr. Tomberlin's opinion?
2	A I did.
3	Q And what was that?
4	A His opinion paralleled Dr. O'Connor and
5	Dr. Anderson in that the time of death really would have
6	been at sunset or later for the same reasons we talked
7	about because there's no eggs on the body. Had flies been
8	active at the time he died, there should have been eggs
9	visible in the autopsy photographs.
10	Q And your understanding is that sunset was
11	approximately at what time that evening?
12	A So the weather service said it was 8:01 p.m.
13	Q Okay.
14	A But, again, I learned the term nautical sunset
15	later. It's not a huge difference, but about that time of
16	day is the is the earliest Mr. Bailey could have died.
17	Otherwise, we should have seen fly activity.
18	Q Dr. Baker, how do the expert opinions of the
19	entomologists in this case factor into your time of death
20	estimation?
21	A So they factor in in two ways. One is I don't
22	actually need them because one could reason Mr. Bailey's
23	time of death from the rigor observations through all
24	those, you know, charts and stuff that I drew here on the

screen.

Q Yes.

A But I would point out that their opinions align perfectly with my time of death estimation being, again, about eight hours before he died, give or take several hours in either direction.

To me, it's a nice validation that two sciences that don't really depend on each other converged on the same conclusion using different data sets.

Q So independently, you had arrived based on rigor at a time of death and factoring in heat and -- at approximately 8:00 p.m. and then reviewed the entomologists who came independently to a similar conclusion based on their forensic discipline?

A That's correct. And I would just add, it's not just the heat that allows you to be reasonably confident that Mr. Bailey's, you know, bell-shaped curve of how long he could be dead -- how wide that is. It's also the fact that two different people observed his body only eight hours apart. And he went from full body rigor mortis to no rigor mortis in only eight hours. It's a much shorter period of time than you would expect. And that has nothing to do with the flies. That's an independent observation.

1	Q Sorry for simplifying that, Dr. Baker.
2	A No. That's okay. I just want to be I just
3	want to be clear.
4	Q And so your determination that Dr. Bailey's [sic]
5	most likely time of death was 8:00 p.m. was based on the
6	observation at 4:00 a.m. at full rigor and the dissipation of
7	rigor at noon within an 8-hour period?
8	A Correct.
9	Q Leading you to put time of death at 18 hours before
LO	autopsy 16 hours before autopsy?
11	A Yes. Again, when we use the number 8 or the
L2	number 16, that's the peak of my confidence level. That's
13	a bell-shaped curve that's a couple of hours in either
L4	direction. But it's different than Dr. Simms' estimation
L5	because he allows for a much wider time of death. And
L6	it's certainly different than Dr. Wetli's estimation.
L7	Q So because in coming to a time of death estimation
L8	based upon the pathology alone, you, you know, it's a curve
L9	and you do have, you know, as you said plus or minus a few
20	hours, if time of death is a significant issue, and important
21	to look for other avenues to establish time of death?
22	A Yes.
23	Q And in terms of forensic sciences, one of the few

avenues available would be entomology?

24

A Correct.

Q So if in general, if you were working on a case and somebody came to you and said, time of death is a critical issue, what other forensic disciplines can be use today help narrow time of death without it -- even knowing any other factors, what would your answer be?

A Beyond pathology, forensic entomologists sometimes assist with cause of death and forensic anthropologists sometimes assist with cause of death. At the time Mr. Bailey passed away, there were no other forensic disciplines that I'm aware of that would routinely have any skills to bring to the table.

In the modern era, you could argue that digital forensics, you know, in the era of videotapes and Facebook pages and textbook -- or text messaging, but this was a different era. So it's really just the three traditional biologically grounded ways of looking at dead bodies. You know, the insects, the pathology, and the anthropologist.

O Thank you, Dr. Baker.

THE COURT: Are you finished?

MS. POTKIN: Yes.

THE COURT: Can we just start to cross tomorrow?

MS. DIGIACOMO: That's fine, your Honor.

THE COURT: All right. Thank you, Doctor, for your

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1
     time. We'll see you tomorrow at 10:30 in the morning,
 2
    please.
 3
         THE WITNESS: Thank you, your Honor.
        MS. DIGIACOMO: What time?
 4
 5
         THE COURT: Can you do 10:30? Do you have court?
        MS. DIGIACOMO: What's tomorrow? The 10th?
 6
 7
        MS. POTKIN: Yes.
 8
        MS. DIGIACOMO: I do.
 9
         THE COURT: Because he needs to probably be at the
10
     airport by 2:00 something.
11
        MS. DIGIACOMO: I apologize. I planned on 1:00. Can
    we do 11:00?
12
13
         THE COURT: 11:00 is fine. We can just go through
14
     lunch.
15
        MS. DIGIACOMO: Okay. Thank you.
16
                PROCEEDING CONCLUDED AT 04:49 P.M.
17
                               *****
18
    ATTEST: I do hereby certify that I have truly and
19
20
     correctly transcribed the audio-video recording of this
21
    proceeding in the above-entitled case.
22
23
                                              Hearing Reporter
24
```

RTRAN

DISTRICT COURT

CLARK COUNTY, NEVADA

STATE OF NEVADA,

Plaintiff,

V.

DEPT. NO. XXIII

KIRSTIN BLAISE LOBATO,

Defendant.

BEFORE THE HONORABLE STEFANY A. MILEY,

DISTRICT COURT JUDGE

TUESDAY, OCTOBER 10, 2017

RECORDER'S TRANSCRIPT OF EVIDENTIARY HEARING - DAY 2

APPEARANCES:

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1	LAS VEGAS, NEVADA, TUESDAY, OCTOBER 10, 2017, 11:33 A.M.
2	* * * * *
3	
4	THE COURT: Go ahead and make yourself comfortable.
5	THE BAILIFF: This is our 11:00 o'clock, page one, C
6	1772394 Lobato.
7	THE COURT: Ms. Lobato, I don't know what type of meds
8	you take. They're supposed to get them for you from the
9	prison, or at least get them so you can get them at the
10	jail.
11	Are they any type are the medications one that
12	would affect your ability to understand these proceedings?
13	THE DEFENDANT: No.
14	THE COURT: Okay. So if you're not feeling again,
15	I don't know what you're taking, but if you're not feeling
16	well for some reason, please let us know.
17	THE DEFENDANT: Okay. Thank you.
18	THE COURT: All right. Are we on the record, Maria?
19	THE CLERK: Yes, your Honor.
20	THE COURT: Can recall the doctor?
21	I think it's midmorning now. Hi, Counsel. Yes,
22	ma'am?
23	MS. POTKIN: Before we begin this morning, we had a
24	request to see if I could take off Ms. Lobato's shackles

```
during the proceedings, if the State doesn't object to it.
1
 2
         THE COURT: The prison isn't worried that she's going
 3
     to go anywhere.
 4
         THE BAILIFF: Yeah, now she's (inaudible).
         THE COURT: Unless a requirement.
 5
         THE BAILIFF: If Officer McCarthy has no problem with
 6
 7
     it, I don't.
         OFFICER MC CARTHY: The policy states I'm not allowed
 8
 9
     to do it. If you order, I'd have to call down there and
10
     get a supervisor approval.
11
         THE DEFENDANT: It's okay. It's fine. I'll be all
12
     right.
         THE COURT: Okay.
13
         THE DEFENDANT: Yeah, just my hands were falling
14
15
     asleep all day yesterday. So I was hoping to avoid that,
    but I'll be all right. I can tough through it.
16
17
         THE COURT: Well, you know, if it's a problem, they
18
     can handle it at lunch.
19
         OFFICER MC CARTHY: Yeah, we can handle it.
         THE DEFENDANT: Okay.
20
21
         THE COURT: Like I said, the prison is not worried
     that you're going anywhere since they left you here. So I
22
     don't have an issue with the handcuffs.
23
24
         THE DEFENDANT:
                        Okay.
```

```
1
         THE COURT:
                    Okay. Just let us know at lunch.
 2
     Anything else?
         MS. POTKIN: No. That's it.
 3
 4
         THE COURT: Doctor, you were placed under oath
 5
     yesterday. You are still under oath at this time.
 6
              Cross, please.
 7
         MS. DIGIACOMO: Thank you.
 8
 9
                         CROSS-EXAMINATION
10
     BY MS. DIGIACOMO:
11
              I think it's still morning. Good morning, Doctor.
12
         Α
              Good morning.
              All right. Yesterday, you did mention that
13
         Q
     estimating time of death is just that. It's an estimation;
14
     it's not an exact science?
15
16
              Correct.
         Α
17
              All right. And you put that in your report as well?
18
         Α
              Words to that effect at least if not
19
     specifically, yes.
20
              All right. Now with regard to the Spitz and Fisher
21
     treatise that was mentioned yesterday, is that a book you're
     familiar with?
22
23
         Α
              Yes.
24
         Q
              And who uses that book?
```

A Well, forensic pathologists, all the general
pathologists who do autopsies would probably reference it.
I assume that many attorneys have probably used it from
time to time to get up to speed on one topic or another.
Q But it's fair to say it's written for forensic
pathologists?
A I'm not one of the authors, so I'm not sure.
They may have been targeting forensic pathologists and the
larger legal community, but I would say primary audience
is forensic pathologists.
Q Right. And with regard to I think it was chapter
three, subsections one through three that was introduced by
the defense yesterday, nothing in that you take issue with?
A I'd have to read is verbatim to tell if there is
specific things I take issue with.
Q And you haven't read it in a while?
A Not word for word, no.
Q Okay. But just well, generally, though, is it
fair to say what Spitz and Fisher has put in their book is
true to the norms of forensic pathology that you know?
A Generally, yes.
Q Okay. For instance, with regard to their time of
death based upon rigor, that's in Spitz and Fisher as well?

1 0 All right. And they generally comport with what you 2 testified yesterday that it could be 12 -- well, up to 36 3 hours? 4 A If we're talking about the average body under average conditions, yes. The whole time cycle will take 5 about 36 hours. 6 7 So the average time cycle is up to 36 hours? Correct, under normal conditions. 8 Α 9 0 Under normal conditions. What would be the short end 10 of that? 11 In that particular book, they say the entire Α cycle, I think, could be as little as 9 or 10 hours. 12 There's other authors that would say it could even be 13 shorter. I mean most of the studies that have been done 14 15 have not been in super hot environments, and so a lot of 16 these are truly estimates. 17 Okay. But I'm not asking about higher -- hot 18 environments. I'm just asking about under normal conditions, you say it can be up to 36 hours. So it could be as low as 19 20 eight hours? 21 For the full cycle to take place? Α 22 0 Correct? 23 Α On -- room temperature. 24 Q Yes?

Yeah. I don't know what the lower limit is. I 1 Α 2 would find eight hours very surprising. 3 What would you think that the lower limit is? I mean, I'd be speculating. I don't really know 4 5 the answer to that. So for normal conditions, you're unable to say what 6 7 the lower end would be. But it could be up to 36 hours. Correct. 8 9 And when you mentioned in Spitz and Fisher, they talk about the entire cycle can take even nine to ten hours. 10 11 That's under hot conditions, though? 12 Α Correct. 13 Now, with regard to chapter three that the defense introduced yesterday -- and I apologize because I don't know 14 15 what exhibit that is that I'm referring to. 16 MR. SULTAN: G. 17 MS. DIGIACOMO: G. Thank you. 18 BY MS. DIGIACOMO: 19 0 There is a -- sub section three deals with forensic 20 entomology? 21 Α Yes. 22 And you've read that? 0 23 I have. Α 24 And you're familiar with it? Q

1 I have a passing familiarity with it. It's not 2 my area of expertise. Okay. Right. But is it fair to say, though, that 3 4 subsection of chapter three deals with when there is insect activity on the body and what you can do about did? 5 6 A Correct. 7 All right. Now, you said yesterday that to determine or estimate a time of death, there's four main things that 8 9 forensic pathologists look at? 10 Α Correct. 11 And that would be the coolness of the body, the pooling of the blood, the stiffening of the muscles and/or 12 stomach contact -- content? 13 14 Α Correct. 15 0 Correct? 16 Α Yes. 17 Now, is it fair to say there are other things a 18 pathologist can look about the body in determining rigor and 19 time of death -- or sorry, not rigor -- determining time of death? 20 21 Α There are. So let me clarify my answer about 22 those four things. 23 Q Okay. Those four things are what we call the -- the 24

1 early postmortem period when things like rigor and livor 2 and temperature still matter. There is what we call the 3 late postmortem period where there is other changes that 4 ensue on the body, such as decomposition. Those can also be used to estimate time of death, but I didn't bring 5 those up yesterday because Mr. Bailey's still in what we 6 7 call the early window of time of death because he was demonstratively in rigor mortis when he was examined. 8 9 Q Okay. So there are other features, but they're down the 10 11 line time wise. They're down -- so there's nothing else when a body 12 13 is presumed to have been, I quess, deceased for eight to 12 14 hours, which I think was around your estimate, or eight to 16 15 hours. 16 I think the answer I gave was that I would say it 17 was most likely his death was about eight hours before he 18 was examined, give or take several hours in either 19 direction. There is always a margin for error, but the 20 center of that curve for me would be about eight hours. 21 Q Okay. 22 THE COURT: Are you talking about the examination by the CSA? 23

MS. DIGIACOMO: The investigator.

24

1 THE COURT: I'm sorry. By the -- let me ask it a 2 different way. The examination you said was at eight 3 Which examination? Is it the one at 3:50 or the 4 one by the pathologist at noon? 5 THE WITNESS: Your Honor, I'm referencing the one at 3:50 in the morning by the coroner's investigator. 6 7 THE COURT: Thank you. THE WITNESS: What she said, the body was in full 8 9 rigor mortis. 10 BY MS. DIGIACOMO: 11 All right. Now, you in this case were given all the 12 autopsy photos to look at? 13 As far as I know, yes. So you had the crime scene photos as well as the ones 14 15 taken during the time of autopsy like we saw with the eye that 16 was being held open? 17 A Yes. 18 Okay. And you didn't see any insect activity or just didn't see evidence of eggs from blowflies? 19 20 I didn't see anything that I recognized as insect 21 activity, eggs or otherwise. And what -- I guess when you were looking at the 22 0 photos, what specifically would you have been looking for to 23 24 see if there had been insect activity?

1	A Well, it depends on the insects you're talking
2	about. I mean, I've certainly done autopsies where the
3	body is teeming with maggots. That's not very subtle.
4	Q I'm asking when you look at the victim's photos here
5	and you're trying to see whether or not there's insect
6	activity of any kind, like what would you look for?
7	A Well, again, it depends on the type of insect
8	we're talking about. If we're specifically talking about
9	fly eggs, generally they will go for moist orifices of the
10	body first such as the eyes, the ears, the mouth. They're
11	particularly attracted to bloody wounds. And so those
12	would be the areas I would like at first for clusters of
13	fly eggs.
14	Q Okay. And you didn't see those?
15	A I did not.
16	Q All right. What else did you look for on the body?
17	A In in terms of injury or scars or
18	Q Any sort of insect activity, insect?
19	A Right I didn't see any on the body.
20	Q All right. So you but let's say cockroach
21	activity. What would that look like on the body?
22	A Cockroaches can leave light marks on the body,
23	little divots in the skin can be missing.
24	Q And you didn't see any of that?

1 Α I did not. 2 And you specifically looked for that? 0 3 Α Yes. 4 What else did you specifically look for with regard 5 to insect activity? 6 Anything that could be referable to insect A 7 activity, whether it's eggs, actual insects themselves, or predation by insects. 8 9 All right. Well, we talked about you looked for eggs. You looked for what could be cockroach bites for lack 10 11 of a better word. What else did you look at when you were 12 looking at the photos? 13 I guess I feel like I just answered that question. Am I missing something? I --14 15 I'm asking you as you're looking for the photos, 16 you said you specifically looked for eggs. Didn't see any? 17 Α Right. 18 You specifically looked for any evidence of cockroach 19 activity on the body; correct? 20 So what I looked for was eggs from insects, 21 actual insects themselves, and things that insects might do to a body, which we call predation, which is chewing on 22 it. I don't know that I could specifically distinguish 23 24 certain ant bites from certain cockroach bites, but I

still look for those little pattern injuries on the bodies 1 2 that one can sometimes see. So I didn't see any of the things that I just described. 3 4 Okay. So you didn't see any evidence of any sort of 5 bites or -- by the insects? 6 A Correct. 7 Okay. All right. Now you said yesterday, when you have bodies that are dead for longer periods of time, that's 8 9 when you can use forensic entomology or anthropology to help determine time of death; correct? 10 11 A Yes. And you said -- you basically use it when rigor won't 12 13 help; correct? Yes. When we're in a stage where livor, rigor, 14 15 temperature, all of those things are behind you and you're 16 in the late stages of --17 Okay. So for -- when you say for late stages, would 18 there be insect activity on those bodies such as the maggots 19 or the eggs, et cetera? 20 There certainly can be depending on where the 21 body was found. 22 All right. Have you -- you said that you only use 0 23 entomology or anthropology in rare circumstances; correct? 24 Α Yes.

1	Q And so when you have a body that's been dead a long	
2	time and out of rigor and all that that you talked about	
3	pathologists normally look at, when you have consulted an	
4	entomologist, has there been insect activity on the body?	
5	A Yes.	
6	Q Have you ever consulted an entomologist when there	
7	has been no insect activity on a body?	
8	A Not that I can recall.	
9	Q And when you when you talk about when rigor won't	
10	help or the normal signs went help, we're talking at least 36	
11	hours plus since the body has been gone been deceased?	
12	A Depending on environmental circumstances, yes.	
13	Again, 36 would be temperate circumstances. You would	
14	expect that to be considerably shorter in a hotter	
15	environment.	
16	Q So it's fair to say, though, environment plays a big	
17	role in determining time of death based upon the factors of	
18	the body?	
19	A Yes.	
20	Q Now, you said that you were hired by the Innocence	
21	Project to review this case last December?	
22	A Yes.	
23	Q Okay. And what did you charge them to consult?	
24	A I haven't charged them anything and I don't	

1	intend to.		
2	Q	Okay. So you're doing this pro bono?	
3	А	I don't know if that's a legal term or not when a	
4	physician does it, but I'm not charging them. Is that		
5	Q	So you okay. You're doing it for free?	
6	А	Yeah.	
7	Q	Now, at the time that you received all of the	
8	information from them to do your, I guess, initial evaluation,		
9	you said	that you did not read or consult the two entomology	
10	reports	that have also been provided to you; correct?	
11	А	Not until after I had looked at the pathology	
12	data.		
13	Q	Okay. So you is it fair to say you looked at	
14	everything and then established your time of death or		
15	estimati	on and then looked at the entomology evidence?	
16	А	Yes.	
17	Q	And then I believe it was your statement yesterday	
18	that the	e entomology reports that were given to you just kind	
19	of confi	rmed what you estimated as the time of death?	
20	А	Confirmed would be one word. I would say they	
21	are enti	rely congruent with the way that I look at the	
22	time of	death as a pathologist.	
23	Q	So congruent. So there was nothing in those	
24	entomolo	gy reports that was at odds with what you thought,	

1	what your estimate was?		
2	A	I don't believe so, no.	
3	Q	And those entomology reports had no effect on your	
4	opinion v	whatsoever?	
5	А	Correct.	
6	Q	Now, you said yesterday too that you are you	
7	referred	the Innocence Project to Dr. Tomberlin?	
8	А	Yes.	
9	Q	Who you're friends with?	
10	А	Yes.	
11	Q	And you've worked with him before?	
12	А	We've worked in a professional capacity like on	
13	committees and stuff, but I've never worked with him on a		
14	case that I can recall.		
15	Q	Okay. So if the two entomology reports were	
16	congruen	t with your time of death estimate, why would you	
17	refer the	e Innocence Project to another entomologist?	
18	А	Because they asked me to. They asked me if I	
19	knew one.		
20	Q	Oh, so it wasn't your idea. They asked do you know	
21	another one?		
22	А	Correct.	
23	Q	Okay. And you said, though, you have in your	
24	experien	ce as being I believe you said chief medical examiner,	

1 you have responded to scenes? 2 Α Yes. But you haven't in the last few years? 3 4 Α Well, we only stopped going to scenes about a year or year and a half ago. So until very recently I was 5 6 still responding to apparent homicide scenes when I was on 7 call. Okay. So working about 12 years -- does that sound 8 9 about right, you were responding to scenes? 10 For about 12 years? Is that -- no. It was 11 closer to 15 or 16. Okay. So did you -- I thought you said -- when did 12 you start in the office. I apologize. I thought you said 13 14 2004. 2002, I was an assistant chief. And so from 2002 15 until around 2015, 2016, I was going to scenes with 16 17 whenever I was on call. 18 Q And those scenes were all in your geographical area? 19 A Yes. 20 So all in the Minnesota area or --0 21 Twin Cities, yes. Α Twin Cities. 22 0 Yeah. 23 Α 24 Okay. And you said whenever you would respond to Q

1 bodies who -- that were outside, there was always teeming with 2 flies, I believe was your term? I don't know if I said always. I mean it is 3 Minnesota. Some of these scenes are in the middle of snow 4 5 It's a very different circumstance. 6 Right. 0 7 But --Α But when the weather permits? 8 0 9 Right. Under the right weather circumstances, Α you know, certainly during the day, I've seen bodies 10 11 teeming with insects. I've also been to death scenes as night where other insects -- I specifically recall a 12 13 recent case involving ants have been present on the body. So it is possible, then, that you -- well, let me 14 15 strike that. 16 So in a warm climate in the Twin Cities area when 17 you've responded to bodies during the day, have they always 18 had flies? 19 Again, if the body is outside, I don't -- I can't 20 answer that every one of them has had flies because often 21 I don't even make a notation of that. You don't make a notation? 22 0 23 If I'm at a scene and there happens to be some flies on the body, I may not necessarily lend any credence 24

1 to that because generally they're more of a nuisance than 2 a help if you happen to be the medical examiner responding 3 to the scene. 4 Okay. What if there were eggs to the body? Is that 5 something that would be noted? 6 A It would not necessarily be noted by me. 7 It would be noted by my investigator because they're present at every scene, whether I'm there or not. And 8 9 they're taking photographs of what they're observing while they do it. And generally, I will have had access to 10 11 those photographs before I even open the body bag and 12 start the autopsy. 13 So yes, that would be noted. 14 Okay. But by somebody else? Q 15 By one of my staff, yes. Α And so is it common though to have blowflies lay eggs 16 17 on bodies that are outside in I quess when the temperature 18 permits? 19 A Yes. 20 Have you ever seen a body in your region that was 21 outside during the day, 80 degrees out that did not have any sort of blowfly activity or eggs on it? 22 23 Not that I can recall. Α 24 All right. So I think in your report you said that

rigor is normally detected 30 minutes to one hour after death, 1 then becomes fully developed 6 to 12 hours and remains for 2 3 about 12 hours and then starts disappearing over the next 12 hours? 4 5 Yes. That's typical. 6 Okay. That's typical. So then that's where we get 7 that 36-hour range? Correct. 8 A Okay. Now, you talked about some factors on can come 9 into play with rigor regarding I think you said the clothing, 10 11 the temperature, the person at the time of death, if there is a struggle before they die, fever at the time of death, and 12 13 then the subjective assessment of who, I guess, pronounces the 14 body and makes the determination of the status of the body? 15 Α Yes. All right. Are there any other factors that can come 16 17 into play? 18 Α In? 19 0 Determining rigor and time of death? 20 Determining rigor or causing rigor? I --21 because --Well, I guess causing, like, what would make is 22 faster or slower. Any other factors that come into play with 23 24 rigor?

1 Α I think we covered all of the major factors. 2 There --3 The major. 0 There could be some drug or medication 4 A 5 that's could affect rigor and make it come on faster. Okay. But that wasn't an issue in this case? 6 7 Not that I recall, no. I mean, Mr. Bailey did have evidence of recent cocaine use in his toxicology, but 8 9 he did not actually have the parent drug in his system. 10 So I wouldn't consider that to be a factor. And other 11 circumstantial --12 Okay. He had the metabolite only? 0 13 A Correct. 14 All right. 15 In other circumstances, parent cocaine could cause one to be more active, in which case you would 16 17 expect to come on faster. But I have no reason to believe 18 that specifically is the case here. 19 Right. And with regard to a lot of these factors 20 that you mentioned, it all depends upon the individual person; 21 correct? The decedent? 22 Α 23 0 Yes. 24 Α Yeah. People are going to vary.

1 0 Okay. And just because one person, their temperature 2 is, you know, a certain temperature the time of death and you have another person with the same temperature at time of 3 death, it doesn't mean their bodies are going to progress the 4 5 same way in rigor; correct? 6 A Correct. 7 Now, would -- you talked about if the body had clothing on that could keep it warmer, that could be a factor 8 9 with regard to rigor? 10 Α Yes. 11 And you said that on hot days or when the body is hot, then rigor can be accelerated? 12 13 A Yes. And you're estimating how much that rigor is 14 accelerating? 15 16 Α Yes. 17 Okay. You done know positively this is what it was. 18 It was eight hours or 18 hours; correct? 19 Correct. That's why -- that's why I try to 20 illustrate it as a curve. That's why I say look, when I 21 say eight hours, you got to put a couple of hours at least in either direction on that estimate. 22 All right. Now, you talked about you looked up the 23 0 24 weather for July 8th, 2001, in Las Vegas when you were doing

```
1
     your analysis; correct?
 2
         A
              Yes.
              All right. And you mentioned a few times yesterday
 3
 4
     that it was hot in Vegas on that day?
 5
         Α
              Correct.
 6
              All right. Does it make a difference to you that it
 7
     may have been warmer temperatures on that date but it was
     completely cloudy day per the weather reports?
 8
 9
              I don't know how the clouds affect the ambient
10
     temperature. I assume that temperature measurement is of
11
     the air.
              All right. But you it -- but you agree, though, it
12
13
     did show that the entire day was mostly cloudy?
14
              I don't recall looking at the clouds. I just
15
     looked at the temperature.
16
         MR. SULTAN: E.
17
         THE COURT: (Inaudible) the day before the body was
18
     discovered.
19
         MS. DIGIACOMO: Your Honor, I'll clarify.
20
         THE COURT: Please.
21
     BY MS. DIGIACOMO:
22
              All right. So I'm going to show you the hourly
23
     weather report that is defense --
24
         MS. DIGIACOMO: Is it in?
```

1 THE CLERK: Yeah, it's in. 2 MR. SULTAN: E. 3 MS. DIGIACOMO: It's in, okay. BY MS. DIGIACOMO: 4 Defense Exhibit E. And this shows the hourly weather 5 report for July 8th, 2001, starting at midnight and going all 6 7 the way through to midnight; correct? 8 A Yes. 9 Okay. Is this what you looked at when you were making your determination? 10 11 It was either that or something very much like 12 that, yes. 13 Okay. So if you look at the times, it looks like it's an hour apart. And you go down the very right-hand 14 15 column that shows conditions. If you could look at both of 16 those pages and just let me know when you're done, please? 17 A Sure. 18 Are you done? 19 A Yes. 20 All right. So does it show that the conditions were 21 mostly cloudy, scattered clouds, or haze for the entire day? 22 Α Yes. The 24-hour period? Okay. But you are unsure how 23 24 that would factor in with whether or not there was accelerated

1 rigor or not? 2 I'm unaware that clouds have anything to do with It's a temperature-dependent phenomenon. 3 rigor. Well, you -- you'd agree, though, if -- if there's 4 clouds and where the body could be, it could keep the body 5 covered or did keep the body cooler. Or no? 6 7 MS. POTKIN: Objection. Asked and answered. THE COURT: Sustained. I think he's indicated he 8 doesn't know. He indicated he didn't (inaudible) what 9 affect the rigor, the lack of sun would affect the rigor. 10 11 MS. DIGIACOMO: Okay. 12 BY MS. DIGIACOMO: 13 What about the body being covered on this hot, as you called it, day? 14 15 Well, if not guilty to the extent a body is covered, that's going to retain heat. So you would expect 16 17 that to make the rigor come on even faster, all other 18 things being equal. 19 Does it depend what the body is covered with? 20 Well, yeah, because different things are going to 21 have different insulating values. 22 So if the body doesn't have much clothing on, like Mr. Bailey's body. You'd agree with that? That the pants 23 24 were down around the knee area?

1 Α As I recall, he had pants, a shirt, and a pair of 2 socks. 3 Right. The shirt was open; correct? 0 4 I don't specifically recall at the moment, but... Α Would you like me to show you the photographs? 5 0 If it's relevant to the question you're going to 6 A 7 ask, sure. All right. 8 0 9 MS. DIGIACOMO: May I approach, your Honor? 10 THE COURT: You may. MS. DIGIACOMO: And I'm showing -- it's going to be 11 12 F-9.13 THE COURT: The other exhibit on the weather report, that was not admitted. 14 15 MS. DIGIACOMO: It wasn't. THE COURT: Are you admitting by way of stipulation. 16 17 MS. POTKIN: I believed it was admitted yesterday 18 along with the coroner's report, the photos when we did 19 exhibits D, E, F. 20 THE COURT: What's it marked as? Defense? MS. POTKIN: C. C, D, E, and F. 21 22 THE CLERK: The only things that I have admitted are 23 A, B, and B-1. B-1 is the timeline. 24 MS. DIGIACOMO: A, B, and B-1.

```
1
         THE CLERK: Yeah.
 2
        MS. DIGIACOMO: Okay. So C, which was the autopsy
     report, she did move and I had no objection. But I think
 3
 4
     that's when we got --
         MR. SULTAN: Took a break, I think.
 5
        MS. DIGIACOMO: Yeah. We took a break. So the State
 6
 7
    has no objection to C.
 8
         THE COURT: Okay.
 9
        MS. DIGIACOMO: No objection to D, which is the --
10
         MS. POTKIN: Coroner's report.
11
        MS. DIGIACOMO: That's the coroner's report.
12
        MS. POTKIN: Yes.
13
        MS. DIGIACOMO: So C was the investigator report?
14
        MR. SULTAN: Autopsy.
15
        MS. POTKIN: C was the autopsy report. D was the
     investigator -- maybe your calling it --
16
17
        MS. DIGIACOMO: Okay. Investigator. E was the
18
     weather?
19
        MS. POTKIN: Correct.
        MS. DIGIACOMO: No objection. And F was the photos.
20
21
        MS. POTKIN: And G was the chapter three of Spitz and
    Fisher.
22
        MS. DIGIACOMO: Okay. F, no objection. And G, if
23
24
     you recall, I did say since they were publishing it, no
```

1 objection at that time. I was able to review the book and 2 I have no objection. 3 MS. POTKIN: Thank you. 4 THE WITNESS: Thank you. BY MS. DIGIACOMO: 5 6 Okay. I'm sorry, sorry. Now, let's go back. 7 It's all right. I'm going to show you a photograph that is marked and 8 admitted as Defense's F. 9 10 This one? Α 11 No. I'm sorry. Q 12 A Oh. I was looking. F-90. And 91, if that's helpful? 13 Q MS. POTKIN: Okay. Would it be possible to publish on 14 15 the MOBI just because they are not all marked yet so we 16 can -- the ELMO, sorry -- so we can see what you're 17 referring to? 18 MS. DIGIACOMO: Sure. It's kinds of difficult to do 19 with the book. 20 BY MS. DIGIACOMO: 21 All right. So I'm going to show you first of all State -- or excuse me, Defense's Exhibit F-90. And it's kind 22 23 of washed out on the screen, but do you see that? 24 A I do.

1 0 Okay. And then showing you, I think it goes this 2 way, F-91. Do you see that as well? 3 Α I do. 4 Okay. So with regard to the clothing that is on the 5 body, how would you describe it? The shirt that he's wearing is pulled up on his 6 A 7 abdomen to just the top end of his navel and his pants are pulled down to about his knees, at least on his left. 8 It's a little hard to see on the right distinguishing the 9 garbage. But they're somewhere around his knees, it looks 10 11 like. Okay. It's very bright. And you'd agree that the 12 shirt is not buttoned? 13 14 Α Sure. So that amount of clothing on the body isn't 15 something that's going to, I guess, hold the heat in or make 16 17 the acceleration go faster with rigor? 18 Α I would say that that would -- his particular 19 clothing would be a very minor component. 20 0 Okay. 21 I mean, again, we're talking about an ambient temperature that's already in the 90s. I can't believe 22 that clothing is going to make a huge difference. 23 24 Well -- well, you'd agree with me, though, especially

```
1
     from the weather report, it wasn't in the 90s all day;
 2
     correct?
              I'd have to look at the report again. But I'm --
 3
     I'm -- excuse me. I'm referring to the broad daylight
 4
     hours. Let me be more clear. It did get into the 80s in
 5
 6
     the evening.
 7
             Okay. Well, let's -- broad daylight hours -- let's
     look. So 7:00 o'clock -- let me zoom in for you. Okay.
 8
 9
     at 7:00 o'clock --
10
        A Oh.
11
        UNIDENTIFIED MALE SPEAKER: It's hard to read.
12
        MS. DIGIACOMO: Oh, whoa. I don't -- Jason, do you
13
    know why this is so bright?
14
        MR. SULTAN: Do we have the thing?
15
        MS. DIGIACOMO: Is that it? No, I -- is there a way
16
     to take down the --
17
        MS. POTKIN: Would you like to give him a copy of it?
18
        MR. SULTAN: Are -- we can look at our copy.
        MS. POTKIN: Put it on here.
19
20
        MS. DIGIACOMO: Yeah. Because it's very bright and
    you can't see the photos. Try this. See how it's washing
21
22
     it out.
        UNIDENTIFIED FEMALE SPEAKER: Well, it's either -- you
23
24
    have to use this.
```

```
1
         MS. POTKIN: We have a copy that you can provide the
     witness if --
 2
 3
         MS. DIGIACOMO: I understand. But there is something
 4
     wrong with the equipment.
 5
         THE WITNESS: That made it great.
         MS. DIGIACOMO: Hold on. It's still kind of washed,
 6
 7
     but that is better.
     BY MS. DIGIACOMO:
 8
 9
              So let's try now. Let's go back to Defendant's E.
         0
     Let me try zooming in again. Is that clear, Doctor?
10
11
         Α
              Yes.
              Okay. So let's just look at 7:00 a.m., it's 79
12
         0
13
     degrees?
14
         Α
              Correct.
15
              Okay. And it then hits 90 at about noon?
16
         Α
              Yes.
17
              An stays in the 90s until looks like just after 9:00
         Q
     o'clock, between 9:00 and 10:00 o'clock?
18
19
         A
              Yes.
20
         0
              Okay.
21
         MS. DIGIACOMO: The Court's indulgence.
     BY MS. DIGIACOMO:
22
23
              Okay. So clothing wouldn't really it would be a
     minor factor, you said?
24
```

1	A Yes.		
2	Q And if the body was covered in trash that was		
3	cardboard boxes, trash bags from an office building, maybe		
4	cups, that kind of thing, would that be a factor in holding		
5	heat in or no?		
6	A It would be. It would be difficult for me to say		
7	how much because I don't know the insulating value of		
8	those various things, but it's clearly, it's going to		
9	provide something more than just air as an insulator to		
10	trap heat.		
11	Q So it would not keep the body cooler. It would keep		
12	the body warmer?		
13	A Correct.		
14	Q Does the humidity play into it at all?		
15	A I believe it can, although I don't know how it		
16	would play into this case. But		
17	Q Well, how would it in general play in? What factor		
18	would humidity in a geographical area play into it?		
19	A My understanding is that it can accelerate rigor		
20	as well when it's hot and humid as just opposed to being		
21	hot. But I don't know how much.		
22	Q Okay. But you'd agree, though, in Las Vegas, there's		
23	not a lot of humidity?		
24	A That's certainly been my experience and my		

1 assumption that it's -- you don't have a lot of humid days 2 here. All right. So we're talking about a hot, dry climate 3 4 when discussing rigor for Mr. Bailey? 5 As far as I know, yes. 6 And with regard to the, I guess, the temperatures 7 that were recorded for that day that we looked in State -excuse me, Defense's E, you'd agree that that would be where 8 9 was taken at a weather station for Las Vegas? 10 I assume so, yes. We don't know the exact temperature of the enclosure 11 where Mr. Bailey's body was? 12 13 A No. All right. Now, yesterday with regard to your graph, 14 15 you said because -- if I've not this correctly -- because at 3:50 a.m. body was in full rigor. And then by noon, the body 16 17 was flaccid again. You took it to where that bell curve would 18 take you back eight hours because of the heat that rigor would 19 be accelerated more. But is it fair to say that the point in 20 time where the coroner investigator did their examination, 21 that's the top of your bell curve? That coroner's examination does not have to 22 Α No. 23 be the exact top of my bell curve. 24 Q Okay?

1	A And in fact, that's why when I give you a time of
2	death estimate, I give the plus or minus X amount number
3	of hours in either direction because I don't know where
4	that investigator is near the top of that curve when she
5	says full body rigor mortis. I mean, clearly it's in that
6	area of the curve, but I can't tell you exactly where it
7	is on that curve.
8	Q All right. So in your opinion, was the body in rigor
9	for a while then?
10	A I don't I can't know that because it was a one
11	point in time examination.
12	Q All right. So but with regard to normal rigor, is
13	it fair to say there's a time that the body is going into
14	rigor, then it stays in rigor, and then the time where the
15	rigor is dissipating from the body?
16	A Yes. That's how it's classically described.
17	Q Okay. And you have no reason to dispute that?
18	A No. In fact, that's been my experience.
19	Q Okay. So hour you, I guess, determining this period
20	of time from the time of the autopsy back as the curve?
21	A So those two observations are eight hours apart.
22	And I'm just going to use 4:00 o'clock in the morning
23	because it makes the math so much easier.
24	Q That's fine?

A Okay. Instead of 3:50. So you have a coroner's investigator saying the body's in full body rigor mortis at 4:00 o'clock in the morning you have a trained forensic pathologist starting the autopsy eight hours later who says there's no more rigor mortis.

So you know you have these two observations and you know they're eight hours apart. In a temperate environment, those would observations should be considerably more than eight hours apart because it takes a good 12 hours under normal temperate conditions for a body to go out of rigor mortis.

So those two observations alone tell you you're on an accelerated curve. Now, we would have predicted that anyway just knowing he was in a hot environment, but you actually have validation from two trained observers that those two points in time, they were considerably closer together than they would be in normal circumstances.

Q Are you saying that -- that going into rigor, being in rigor, and then coming out of rigor, those three different time periods have to be equal?

A They -- well, they're generally described as being equal, meaning it takes about 12 hours for a body to go into rigor. Takes about 12 hours for it to stay in

rigor, about 12 hours for it to dissipate and go back to a 1 2 flaccid state. So they're generally described as being 3 equal. I could certainly entertain the idea that the 4 time it's in rigor mortis could actually be shortened 5 6 because of the temperature as you squeeze that curve 7 tighter and tighter. Okay. So it's just generally thought that they're 8 equal, I guess, time periods with regard to rigor? 9 10 Yes. And to qualify that answer, I would also Α 11 say that most pathologists would say the same factors that made a body come out of rigor were the same factors that 12 13 made it go into it, which is why we envision it as a 14 curve. It's the same heat. It's the same exertion. It's 15 the same all those other factors I talked about yesterday 16 that keep that curve shape, whether it gets tighter or 17 wider. 18 So if during those different -- those three different 19 periods there's different environmental factors, that doesn't 20 come into play? 21 Oh, it most definitely could. So is it possible that the environmental factors can 22 0 make one stage longer than the other? 23 24 Yes. And that very well could have taken place

after Mr. Bailey's body was picked up from the scene.

Q Okay. What do you mean by that?

A So I don't know if Mr. Bailey's body was refrigerated or not after it was transported by the funeral home from the scene to the morgue. But I do know he got to the morgue in the early morning. I want to say it was 6:00 o'clockish.

So he's now been moved into what I assume it a temperate environment. I have not been to the Clark County Coroner's Office, but I assume it's kept at room temperature. So even if he's not refrigerated, he's not been put in an environment that is cooler. If he's refrigerated, it's obviously even way cooler.

So all of those things will slow down the dissipation of rigor. So in fact, that eight hours where I say the difference between those two points, that could be an overestimate. It could be that he came out -- he would have come out of rigor even much quicker.

I'm being as liberal as I can with these estimates because the post scene environment may actually make that curve even narrower than I've described it to you.

- Q But you can't say for sure one way or another?
- A No. That's why I'm being as charitable and as

1 liberal as I can with my estimates. That's entirely possible that his window of death is even narrower than I 2 3 portrayed because of the fact that his body was taken to a temperate environment on the down slope of that curve. 4 5 All right. Now, how does the cooling of the body 6 play into your time of death? How -- like, at the time when 7 at 4:00 o'clock or 3:50, when the coroner investigator notated that the body was cold at the -- to the touch, how does that 8 9 play into your rigor analysis? Well it doesn't -- it doesn't affect the 10 11 interpretation of rigor at all. I don't know what the investigator meant when she used the word cold. 12 So if -- if a -- if you're talking about the 13 acceleration of rigor because of heat, is the body staying 14 15 warm? 16 Yes. It -- but remember, I mean, bodies are 17 3-dimensional things. Most of the heat is generated from 18 deep inside the body and has to get all the way to the 19 surface before it's gone by radiation or conduction or 20 conduction. 21 Okay. So the fact that the body is cold to the touch 22 makes no difference to you with regard to your estimation of time of death? 23 In this case, no. Because A, I don't know what 24

the subjective word cold means to this particular 1 2 observer. It might mean something very different to me. I mean, we know his body couldn't have been 3 colder than whatever the ambient temperature was, and I 4 5 don't remember what the ambient temperature was at 3:50 in 6 the morning. 7 How many times have you used entomology evidence to establish time of death? 8 9 I don't specifically recall a case where I've ever used it to establish a time of death. To be fair, it 10 11 may be that entomologists have been called in on cases that I've been involved in and I didn't even know about it 12 13 because it's not always necessarily a function of the 14 medical examiner to even contact the entomologist or collect the evidence. 15 16 But I've never directly worked with one to 17 establish a time of death for me because I felt I needed 18 it. 19 0 All right. So is it fair to say it would normally be 20 the investigator who would contact an entomologist? 21 Do you mean law enforcement investigator --Α 22 0 Yes. Again, there may be circumstances where that 23 24 happens routinely in other jurisdictions. It may even

happen in my office where I didn't know it because the 1 2 crime lab or the investigator police agency contacted the 3 entomologist, but what they were doing wasn't really relevant to my role and so I didn't work directly with 4 5 them. But I can't recall specifically me reaching out 6 7 to a forensic entomologist and saying I need you to help me with this case. 8 9 You've never -- you don't recall ever doing that? I can't. 10 Α 11 Okay. But you did say, though, that -- that with pathology when bodies have been gone for -- or dead for a long 12 13 time that you guys could use forensic entomology or 14 anthropology? 15 We could, yes. 16 You could, but you don't normally do that? 17 In the vast majority of cases we investigate, 18 time of death isn't really an issue because the cases 19 aren't homicides. And there's many cases that I go to 20 that are teeming with a variety of insect activity where I 21 could call a forensic entomologist, but nobody is concerned about the time of death because the case isn't a 22 crime. 23 Okay. But what I'm -- but what I'm asking is you --24

1 as you sit here today, have you ever consulted a forensic 2 entomologist regarding your dead body that you have? Not for the purposes of a criminal trial, no. 3 4 What have you contacted one for? Q 5 Oh, over the years, we've occasionally contacted 6 our entomologist because we found entrusting bugs or 7 something on a scene and we were simply curious as to what it was. And these were all sort of curbside 8 9 consultations, but again not for criminal cases, not to establish a time of death. 10 11 Well, that's not even for a civil case either. 12 mean, you just did it out of curiosity? 13 A Correct. 14 Right. Not because there is any need --15 Correct. Α 16 -- for the case? Okay. 17 And is it fair to say that you've -- you said you've 18 done over three thousand autopsies? 19 Α Ballpark three thousand. And you've never done any in the Las Vegas area, have 20 21 you? 22 Not in the Nevada, no. Α 23 0 Where have you? 24 Α I know I did a couple of autopsies in this part

1 of the country when I was in the military because we were 2 on call today autopsies all over the place. But I don't recall ever being at a military installation in Nevada 3 4 doing autopsy that I can recall. 5 All right. So it's fair to say to say that you're probably not as familiar the way our corpses, I guess, are 6 7 based upon our climate, meaning, you know, you'd agree that bodies left outside here in the desert can get dried out 8 9 faster, can mummify, et cetera? 10 I mean, obviously there's going to be some 11 differences, but it's not as if we don't have hot, dry days in Minnesota. We just don't have as many and we 12 13 don't have them for as much of the year as you do. But you've never practiced in our climate, in our 14 Q 15 geographical region? 16 I have never practiced in Nevada, that is true. 17 Now, how does decomposition come of the body -- come 18 into determining the time of death? Or does it? 19 So now we're in what we call the late postmortem 20 So when rigor is useless because it's entirely 21 gone when the body's at ambient temperature when livor mortis is completely fixed, so that we're in what we call 22 the late postmortem period. And yesterday, there 23 24 certainly are features of decomposition that one can use

to estimate time of death, but when you get into that period, you're talking huge margins of error that are very temperature dependent.

So some of the features you can look for in a body that's in that stage is the skin will start to blister and slough off. The body will start to purge, meaning blood and other fluids will come out of the nose and mouth as the stomach swells up with gas and bacteria proliferate in the back of the throat. The body will turn green. It will become bloated.

Q So -- I'm sorry. I didn't mean to --

A I was just going to say the things I just described with the exception of some slippage of skin in Mr. Bailey's case don't apply. I mean, he did not look bloated. He was not purging fluid out of his nose and mouth. His skin hadn't turned green and his eyes weren't swollen. His soft tissue wasn't swollen and full of gas.

And these are things medical examiners see every day. I mean, these are very typical changes of decomposition. But when you see a body in at that stage of decomposition and you start talking about time of death estimates, you're using margins of error that are measured in days or weeks, not hours.

Q Well, I'm not even talking about extreme

1 decomposition --2 Well, those aren't extreme, believe me. Those -that's -- that's mild. 3 4 But normally, is -- are you saying that decomposition 5 starts when rigor is done? 6 I'm saying there comes a point in time where A 7 decomposition is the only thing you have to go on because the rigor has long since past. There aren't any other 8 9 clues. So with regard to any sort of decomposition or skin 10 11 sloughing or slippage of Mr. Bailey's body at the scene, does that have any play or any consideration in your estimate of 12 time of death? 13 In Mr. Bailey's case, I did not find his skin 14 slippage to be particularly helpful. And I'd be happy to 15 16 elaborate on that if you like. 17 Q Sure. 18 So he does have a little bit of skin slippage 19 visible at the scene. As the photographs go on and on, 20 you can see more skin slippage. And then by the time you get to the autopsy photographs, you can see even more. 21 Now, there's a couple of reasons in his that I 22 don't find that particularly compelling in terms of 23 24 changing a time of death estimate.

1 First reason is he died in a very, very hot 2 environment --3 When you say very, very hot --0 4 A I'm sorry. To Vegas ---- what do you mean by that --5 0 To Vegas people, that's probably insulting to say 6 Α 7 95 degrees is very, very hot because I'm sure. Or 90 -- yeah, I think it was 94 or -- but yeah, 8 9 that's not for July day for here, that's not a hot day? 10 Understood. It's very hot relative to a Α 11 temperate environment, to what we consider room temperature. So I'll just -- I'll clarify. When I say 12 13 really hot, I mean it's way hotter than you would ever 14 have your thermostat in your house. 15 I have a question. In the studies THE COURT: contained in the book as far as -- well, the book they've 16 17 been referencing, the Spitz and Fisher book, I just want 18 to make sure I got it right. You said the temperature 19 that was utilized is 68 degrees? Would that be their 20 norm? THE WITNESS: Ballpark, your Honor. I mean these are 21 typically observations or studies that are being done in a 22 23 controlled environment such as a morque or a laboratory. 24 THE COURT: What would be the temperature, the

controlled temperature?

THE WITNESS: What I would consider room temperature. I think most people consider that to be between 68 and 72 degrees, typically. It certainly -- to my knowledge, nobody has done prospective studies with multiple cases in 90 to 95-degree circumstances.

THE COURT: Okay. 60s to low 70s, probably.

THE WITNESS: Yes. Like much of forensic pathology, when you get into the actual cases, a lot of what you read in the textbook is anecdotal because they're not experiments we can ethically do.

And I'm sorry. I got derailed, Counselor, when we were talking about how hot it was here.

## BY MS. DIGIACOMO:

Q That's okay. You were explaining why the skin slippage at the scene was not compelling to you.

A Yes. And let me start by defining what skin slippage is because we're throwing that term around as though everybody in the room would know what it is.

So human skin has multiple layers. We'll just take the simplest splitting of skin and we'll say you've got an outer layer which is your epidermis and your underlying layer, which is your dermis. So there's proteins that hold those two layers together. And after

death, those proteins start to break down and the outer layer of skin will just slip off through very trivial trauma or manipulation.

And that's also a very heat dependent phenomenon. The hotter the body is, the faster those proteins are going to break down, just like the proteins we talked about yesterday when we talked about rigor. So that skin slippage, when you look at a dead body, you see an area of skin that looks like it's been rubbed off, it's because it literally has -- has slipped off through some trivial trauma.

So getting back to Mr. Bailey's case, the reason I don't find the is skin slippage particularly compelling is because, A, it's clearly getting worse at the scene as his body is being manipulated. B, it's clearly getting worse at the autopsy because his body is being manipulated. And I don't mean manipulated in a bad way. I just mean the acts of people who are rolling the body into the body bag, who are picking him up to put him into the body bag, or transporting him to the funeral director's vehicle that are going to bring him back here to the folks who were shooting the X-rays at the morgue later that morning to the act of taking him out of the body bag.

Which, by the way, his clothing was removed at 1 2 the morque before the pathologist saw him. That's going 3 to cause a great deal of skin slippage as that clothing is pulled off, particularly if it's -- that clothing is caked 4 5 with blood because blood becomes like a glue at that point in the process. And it will just pull that skin right 6 7 off. So in his particular case, I don't find the skin 8 9 slippage particularly compelling. You can see bodies with 10 skin slippage that are still on that curve of rigor 11 mortis. Skin slippage is technically a form of decomposition, but it's not the same form as the bloating 12 13 and the purging and the green discoloration and all that 14 other stuff I talked about. 15 You can see it much earlier in the process 16 depending on the circumstances. 17 Q Now, you talked about the stomach contents yesterday? 18 Α Yes. 19 0 Did that come into play at all regarding your time of 20 death estimate? 21 No. I don't believe I utilized it in my report. Α Okay. But you mentioned it yesterday that -- and --22 0 that you thought what was in his stomach should have been 23 lunch or dinner? 24

1	A I don't think I used the phrase should have. I
2	just said the description of that particular sort of food
3	strikes me as the sort of food most people would eat for
4	lunch or dinner.
5	I'm pretty sure I qualified this with saying I
6	didn't know a lot about Mr. Bailey's life circumstances or
7	what his eating habits might be.
8	Q Right. So you a homeless person, it might just be
9	their meal, not just typically lunch or dinner?
10	A Right. Right. It's my understanding he was home
11	less. I'm assuming he probably got his food when the
12	opportunity presented itself.
13	Q Right. And also too, this is a 24-hour town, so
14	restaurants are open all hours?
15	A Just learned that the last two days, yes.
16	Q Okay. Now, you said that that you discussed, you
17	know, what Dr. Simms opined anywhere from eight to 24 hours
18	but most likely 12 to 18 hours from the time the coroner
19	investigator pronounced death yesterday?
20	A That's my aggregate summary of the times that
21	he's testified that I've read, is that he generally
22	settled on 12 to 18 hours by the end of several times he
23	testified.
24	Q Okay. What do you mean by the time in by the

times he finally settled on it?

A So he -- and I don't know the exact dates, but there was some sort of preliminary hearing took place not long after Mr. Bailey died. And Dr. Simms testified at that. And then there was a trial and he testified at that. And then I believe there was another trial in 2006. Again I may not know the exact dates. And he testified again at that.

And in those different occasions, not to the same degree, but questions about time of the death were asked. And he did give different answers when he testified, but in general, by the time you got to the third testimony, it appeared that he was most comfortable with 12 to 18 hours.

I would point out that in the preliminary testimony, the first time that he was asked, he said more likely than not or more probably than not it was less than 12 hours.

Q Okay. And then you said at the first trial, he said what?

A I don't recall specifically what he said at the first trial. I'm just saying by the time there was a third trial or hearing it appeared he had shaken out to 12 to 18 hours he was most comfortable with.

MS. DIGIACOMO: Your Honor, may I approach?

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1
         THE COURT: You may.
         MS. DIGIACOMO: I'm showing him from the first trial
 2
 3
     volume two, pages 54 (inaudible) to 55 of Dr. Simms'
 4
     testimony.
 5
         MS. POTKIN: Okay.
     BY MS. DIGIACOMO:
 6
 7
              If you could?
         UNIDENTIFIED MALE SPEAKER: Which lines?
 8
 9
         MS. DIGIACOMO: Hold on. That's what I'm going to --
10
     I'll put on the record.
11
     BY MS. DIGIACOMO:
              Okay. If you could start at page -- the bottom of
12
13
     page 53, line 24 and read through to looks like page 55, line
14
     three.
15
              Okay. I want to make sure. So you want me to
16
     start with this question here?
17
         Q
              Yes.
18
         Α
              This whole page through --
19
         0
              That answer.
20
              -- this answer here.
         Α
              Correct. Thank you.
21
         Q
22
         Α
              All right.
              "Question: Is there a standard" --
23
24
              Oh, no, no, no. I'm sorry. Read it to yourself.
         Q
```

1 Α Oh. 2 Just to refresh your recollection. 0 3 Α Sorry. 4 I'm very concrete sometimes. Q 5 Α Okay. Okay. Does that refresh your recollection as to the 6 7 time, the estimated times that Dr. Simms testified at the first trial? 8 9 What I read was him describing the typical rigor mortis of a body, not specifically Mr. Bailey. I mean, at 10 11 some -- go ahead. Okay. But he said usual form -- oh, he's talking 12 13 about rigor. Usual form 12 to 18 hours, dissolves and goes 14 away between 24 and 36 hours; correct? Right. But I think all his answers were like 15 usually and typically. I think was describing -- I think 16 17 he was paraphrasing the textbooks the way that I would. I 18 don't believe that was with reference to Mr. Bailey's --19 And I apologize. We're going to go to the right page I should have had you read. I'm sorry. If you could look 20 21 at -- it will be page 55, starting at lines 20 through to the next page, line 16. Sorry about that. 22 23 That's all right. Line 20 through line 16. Read Α 24 it to myself, right?

1 0 On page 56, yes. 2 All right. Α Yeah. Just read it from here. 3 0 4 Α Gotcha. 5 Thank you. 0 6 Α Okay. 7 Okay. So I'm sorry. Now let me ask you that question about what doctors opined in the first trial? 8 9 Α Okay. What did he say? 10 11 So he said a reasonable degree of medical Α certainty, Mr. Bailey died between in this particular 12 instance, he used ten and 18 hours, but he would have a 13 14 higher degree of confidence widening that from -- between 15 eight and 24 hours. 16 Okay. And is that fair to do in pathology where it's 17 easier to give a wider range as to time of death than to 18 narrow it down to a specific time based upon the body 19 composition? 20 Well, obviously the wider your estimate the less 21 likely you are to be wrong. I mean --22 0 Correct? 23 -- that's just kind of -- a no-brainer there. Α 24 And I understand you have a different opinion than

Dr. Simms does --1 2 I do. A -- regarding the time of death based upon 3 acceleration due to heat; correct? 4 5 Α Correct. 6 All right. But there is nothing concrete you have to 7 disprove what Dr. Simms said? I -- I guess I don't know what the term concrete 8 9 means in the context of this question. Means something -- I mean, you stated before, all you 10 11 can do is estimate a time of death window? A 12 Correct. 13 And that's -- and you said the wider the window the more correct you could be? 14 15 Right. I mean, I could sit here and say that he's been dead for between one and 42 hours and I would be 16 17 almost certainly be right. It wouldn't be a particularly 18 useful for the Court, but, yeah, the wider you make the 19 window, obviously the more unlikely that you've missed the 20 target. 21 Right. But I understand your opinion's different, but there's nothing that you can point to that would give a 22 definite time of death; correct? 23 24 That is correct. There is nothing anyone can

1 point that would give a specific time of death obviously 2 short of a credible witness or a videotape or the actual 3 death being caught on camera. They're all estimates. 4 Right. So -- and all you can do is give a window. And you'd agree that Dr. Simms' window is different than the 5 6 window you have put forth? 7 Yes. His is different and I disagree with it. Okay. Fair to disagree with it. And Dr. Wetli also 8 9 put forth a different window; correct? 10 Did he? Α 11 His is more similar to Dr. Simms' window? 0 12 Yes. Α 13 And you disagree with that as well? Q I could. 14 Α 15 And you said -- I wasn't quite sure that -- you took -- I guess you took issue with the fact that full rigor 16 17 and are full body rigor between the coroner investigator and 18 his report? That was a minor issue with Dr. Wetli and I think 19 20 I emphasized that was not the major bone I had to pick with him. But I did point out that his wording was not 21 identical to what the investigator described. 22 Okay. And then you said that he was either 23 0 24 inaccurate or had faulty reasoning because he says that the

1 body is in full rigor and dissipating at the same time? 2 Α Correct. He did --What do you mean by that? 3 I don't have the curve in front of me, but it 4 A would be a nice illustration. But Dr. Wetli initially 5 more or less correctly paraphrases the investigator when 6 7 he says, she observed full body rigor at 3:50 in the morning. And then three sentences later in that same 8 9 paragraph, he says that body had to have been in 10 dissipating rigor at that time exact same time. 11 He's taken two very different points on that curve and somehow conflated them into one observation. 12 13 don't know why he did that or why he chose to reason that 14 way, but he's taking two observations that would be 15 objectively different to a trained person and making them 16 one observation. 17 Are you saying that Dr. Wetli is not a trained 18 person? Oh, not at all. I have great respect for 19 Dr. Wetli. What I'm -- and again, this may be a perfectly 20 21 honest oversight on his part. When I'm saying is a body that is in full rigor mortis and a body that is in 22 23 dissipating rigor mortis where it's about to go away,

those are way different. I mean, even to a subjective

24

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1
     person, if you were to see a body in those two different
 2
     stages, you would be able to tell the difference.
              And there's a period of time between those, but
 3
     he somehow turns that into the same observation, which is
 4
 5
     just not right.
 6
              Okay. So you disagree with Dr. Simms. You disagree
 7
     with Dr. Wetli; correct?
              T do.
 8
         A
 9
              But there is nothing that you can point to that will
     tell anyone in this courtroom whose opinion's the right one?
10
11
              No. All I can do is prevent -- present the
12
     reasoning for my opinions and the basis behind them and
13
     leave it up to the Court.
              Okay. Now, with regard to if a corpse, when they
14
         Q
15
     expire, their eyes are left open. I quess corneal cloudiness
16
     develops in two to three hours; is that correct?
17
         Α
              I honestly don't recall.
18
         0
              You don't recall?
19
         A
              I don't.
20
         0
              Okay.
         UNIDENTIFIED MALE SPEAKER: Are you looking at chapter
21
22
     3?
23
         MS. DIGIACOMO: Yes. And if I can approach, your
24
     Honor?
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1 THE COURT: Yes. 2 BY MS. DIGIACOMO: I'm going to show you Defendant's Exhibit G. 3 4 A Thank you. 5 MS. DIGIACOMO: It's going to be page 96, Counsel. BY MS. DIGIACOMO: 6 7 All right, sir. I'm referring you to page 96. It's under the caption early postmortem ocular changes, 8 9 specifically the second paragraph under there. Just read it to yourself. 10 11 Okay. Sure. Okay. 12 Is it fair to say two to three hours it can happen? 13 I can't recall ever noting whether the corneas Α were clouded unless there was some extreme ocular 14 15 pathology that I was observing. This is not an 16 observation that I normally make. 17 All right. Well, do you have any reason to take 18 issue with what Spitz and Fisher say in their chapter three in there treatise? 19 20 I -- since I don't normally look at corneas, I 21 have no way to confirm or refute the accuracy of that 22 particular paragraph. 23 Okay. That's fair. 24 MS. DIGIACOMO: These are the ones that are

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1
     (inaudible).
 2
        MS. POTKIN: Oh, wait let me see. Did we get these?
         MS. DIGIACOMO: Yeah. You got a disk.
 3
 4
        MS. POTKIN: Did we get these?
        MS. DIGIACOMO: Yes.
 5
 6
         UNIDENTIFIED MALE SPEAKER: These are from
 7
     different -- other cases?
        MS. POTKIN: Yeah. Judge, we object to publishing
 8
 9
     these pictures. They seem to be from a totally unrelated
     case for which we have no information about the case.
10
11
        MS. DIGIACOMO: Your Honor, they were provided with
     the crime scene analysis report as well as the disk of the
12
13
     photos. And it's demonstrative to use with their experts.
         MS. POTKIN: These were provided, I believe, in
14
     connection with other officers that were listed that the
15
     Court excluded from the hearing.
16
17
         THE COURT: Are these just other bodies or
18
     exemplifiers?
19
        MS. DIGIACOMO: It's another body in our area, yeah,
     that I'd like to use to cross-examine their experts.
20
21
        MS. POTKIN: Well, we have no foundation for the
    pictures. We have no idea where they're from.
22
        MS. DIGIACOMO: Well, actually, they do because they
23
24
    have the reports as to where they came from. But they're
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certainly relevant with regard to their experts when 1 2 they're coming here making claims about bodies that have been deceased in our area. And it's just contrast. 3 THE COURT: But here's my concern is there's been a 4 lot of discussion about the effect of environmental 5 conditions upon the decomposition of the body. We've 6 7 spent a lot of time about temperature, other items that would speed up the decomposition process, which is, you 8 know, being in a bricked-in area, being by a Dumpster, 9 having clothing partially over the body. 10 11 And so my concern is really that you compare apples to apples. And absent something showing that the 12 13 weather conditions were exactly the same, that the conditions in which the body were found were exactly the 14 same, I --15 16 MS. DIGIACOMO: Your Honor, this really --17 THE COURT: I don't know how what's --18 MS. DIGIACOMO: I'm just trying to the lack of foundation with this --19 20 THE COURT: -- useful. 21 MS. DIGIACOMO: -- doctor, but these will be useful when we get to their entomologist because their 22 entomologists are making claims about what the insect 23 24 activity that should have been on the body. So I just

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1
     want to show we got dead bodies that are outside with zero
 2
     insect activity, no eggs laid on them.
         THE COURT: But hold on --
 3
 4
        MS. DIGIACOMO: It actually --
         THE COURT: Stop, please. My -- yes, ma'am?
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        MS. DIGIACOMO: I was going to say this goes to the
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    basis of their opinions, absolutely does. They're coming
     to our environment, which they -- there's no studies here,
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     trying to say is this what should happen and therefore
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     time of death is here, when we have dead bodies all the
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11
     time in our area that do not have blowfly activity
     whatsoever. And it is certainly relevant to be able to
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     cross their experts.
         THE COURT: But, again, I don't even know how they
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     could rehabilitate their expert if I allowed you to
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     impeach them because they have no information regarding
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     the underlying circumstances. Again, you've got to
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     compare apples to apples. And there is no -- if those are
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     from a totally unrelated -- I don't want to say crime
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     scene, but a totally unrelated body that's not in the
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     exact same environmental conditions, I don't see --
        MS. DIGIACOMO: Well, your Honor, if I just --
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         THE COURT: -- the use.
        MS. DIGIACOMO: Okay. Let's just get to --
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1 THE COURT: Because, I mean, we heard lots and lots of 2 testimony that environmental factors -- that's really what 3 this whole case -- this remand is about, this evidentiary hearing about how the environmental factors would affect 4 5 the decomposition of the body. And so --6 MS. DIGIACOMO: But --7 THE COURT: I don't see how those are useful --MS. DIGIACOMO: Well, I'm not --8 9 THE COURT: -- or relevant. MS. DIGIACOMO: Your Honor, what -- okay. I'll skip 10 11 it on this expert. But when we get to the entomologist, here's how it's relevant. The entomologist, we're not --12 13 they're not worried in this case, your Honor, about decomp or six -- or, you know, the eggs or the maggots or the 14 15 infestation found on the body because there was none. 16 Their entomologists are coming in here to say 17 because there was zero blowfly eggs lay them during 18 daylight hours, then time of death has to be after the sun 19 went down at 8:01. That's what their experts are coming 20 in here to say. 21 THE COURT: Well, let's wait until they say it. MS. DIGIACOMO: I'm trying to show, your Honor, is 22 that we have dead bodies hear all the time that expire 23 24 during daylight hours and there is zero blowfly activity

on them. That is certainly relevant to undercut their opinion and their ability to make such a bold claim in our environment.

We don't have the blowfly population that maybe they do back east or in Canada. So certainly, these photos speak for themselves. It's a dead body outside in daylight hours with -- what do you recall it -- the corneal clouding completely covering its eyes and there is zero fly activity. And this doctor said that you can look at photos and clearly see whether or not there's any activity. And that's what I want to show him.

THE COURT: Okay. So -- hold on, please. I don't think it's appropriate through this witness. Secondarily, you're going to have lack of foundation for the entomologist. I'm not going to make any rulings yet. But again, you have to compare apples to apples. I mean, if those photographs are showing -- those don't mean anything. That doesn't -- we don't know how long that body was there. You don't know the stages of rigor that body was in. You don't know what the outdoor temperatures were.

From what I can see, you can just see a bump on the concrete. You can't tell the clothing, the type of clothing, whether they hold heat within the body. All the

1 things that we're discussing throughout this case. 2 So I don't think this is the appropriate individual, but you are going to have to lay a foundation 3 to utilize them for the entomologist. And I think it's 4 better to address it at that point. Because I -- I don't 5 6 know what the entomologist is going to say. 7 MS. DIGIACOMO: Well, and -- I would just at least, since we're going to lose Dr. Baker, have him look at the 8 photos and tell me whether or not he sees any obvious 9 10 signs of blowfly eggs because he testified any competent 11 pathologist can see in photos. MS. POTKIN: And we would object to that. We have no 12 foundation of these pictures. We don't have any idea when 13 14 they were taken. We have no information about the 15 pictures other than just seeing the pictures themselves. 16 THE COURT: I'm not going to allow them for the 17 reasons I've indicated. 18 MS. DIGIACOMO: So I can't even -- not even publish 19 to question him to see if he sees anything to lay the 20 foundation? THE COURT: I mean, it doesn't appear to be a question 21 of, Doctor, does this look like there's -- I mean, he's 22 showed a picture of a body and he identifies what 23 24 different bug marks and bug eggs look like on that

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    picture. But that doesn't seem like that's what you want
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    him to do --
         MS. DIGIACOMO: I want him to look at --
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         THE COURT: You want him to compare -- you want him to
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     look at those bodies that you believe are left outside
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     with no foundation and have him compare to this situation.
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     It's just not appropriate. You've --
        MS. DIGIACOMO: I'm not --
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         THE COURT: -- got to compare apples to apples.
         MS. DIGIACOMO: I'm not asking him to compare it to
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     this situation. I just want to ask him, do you see any
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    blowfly egg activity. That's all I want to ask.
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         THE COURT: What does that go to --
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         MS. POTKIN: Why is that relevant?
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         THE COURT: -- what does that go to show?
        MS. DIGIACOMO: Because it's going to be relevant
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     when they start calling these entomologists that want to
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     give opinions on what should have happened or what
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    happened in this case or should have happened when
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     clearly, their --
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         MS. POTKIN: But that testimony --
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         THE COURT: Hold on. One at a time, please. I can
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     only -- the record can only take one --
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        MS. DIGIACOMO: Your Honor --
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THE COURT: -- person.

MS. DIGIACOMO: -- there's a lot of different things going on. There's two claims that the -- that the defense didn't hire a forensic entomologist -- or excuse me, a forensic pathologist regarding time of death. That's one issue. That's 40.

There's also 38 that they didn't hire a forensic entomologist regarding time of death. Their expert notice for their entomologists state that time of death had to be after 8:01 p.m.

Obviously the State in -- when we went to trial, said it was earlier in the early morning hours was our theory when Mr. Bailey died. The defense is bringing in witnesses to say because there's no eggs laid, because -- he had to have died after dark. Because during daylight hours, every dead body gets blowfly eggs on them.

That's what their experts are coming in to say. So I think it's relevant to show them in our climate you can have a body outside that's been dead or expired and there's zero egg activity on them. It undercuts their opinion in this case.

THE COURT: Okay.

MS. POTKIN: Our experts haven't testified yet. And if the State seeks to ask any information of our

1 entomologist, she can try to at the time. But we have no 2 foundation for the pictures. We have no information. Even at that time without any foundation, it would be 3 inappropriate to publish the photographs or introduce them 4 into evidence. 5 THE COURT: All right. I'm not going to allow the 6 7 photographs with respect to this individual for the residence I've previously indicated. 8 9 With respect to the entomologist, you would have to lay a foundation. Okay? 10 11 MS. DIGIACOMO: Thank you. 12 MS. POTKIN: Thank you. 13 MS. DIGIACOMO: And, your Honor, lastly, I have here what's been marked as State's proposed Exhibit Number 1. 14 15 It's Dr. Wetli's report, and I would move for its 16 admission. 17 THE COURT: Any objections? 18 MS. POTKIN: No. THE COURT: All right. It will be admitted. 19 20 [PLAINTIFF'S EXHIBIT 1 ADMITTED.] 21 BY MS. DIGIACOMO: 22 Now, you talk about your report that any time of death estimate based only on the classic postmortem changes of 23 24 rigor and temperature must be reconsidered when more

1 compelling data arise that serve to sharply refine and 2 constrain that initially estimate; correct? 3 Α Yes. 4 All right. And some of the things you -- you talk Q 5 about is if there's an eyewitness, et cetera? 6 A Yes. 7 Okay. And so is that when you're considering the entomology evidence? 8 9 Α Yes. Okay. So -- and you're agreeing with the entomology 10 11 evidence based upon the lack of blowfly eggs on the body; 12 correct? 13 I -- I want to be very careful in my language. A I'm not agreeing with the entomology evidence because I 14 15 don't have the expertise. I'm relying on the opinions of 16 people that I know to be reputable in the field who have 17 reviewed the case and pointing out that this appears to be 18 a solid data point that would be very useful and sharply 19 refining a time of death estimate. 20 Okay. So -- but you do say that time of death should 21 be reconsidered when more compelling data comes along, and you're saying the entomology data is more compelling than the 22 body data in this case? 23 24 I don't know if I would say -- I don't know if

1 I'd say more compelling, but it's a compelling data point 2 that should cause you, if you're the pathologist, to take 3 another look at your time of death estimate, particularly if your time of death estimate is actually completely 4 5 different than when the entomologists are saying. 6 All right. Now, in this case, were you given any 7 other trial transcripts? Excerpts, primarily Dr. Simms. I don't recall 8 9 any other transcripts. Were you told what time the 911 call came in for the 10 0 11 body? 12 No, I don't recall that. Α 13 All right. So you weren't told when the body was Q 14 found? 15 I only know when the police got to the scene. Α So the police got to the scene about what time? 16 17 I think it was 10:36 p.m. I could have the 18 number --19 All right. No that's -- that's when the 911 call 20 came out. So that's when police responded. 21 Did you know that person who called the police testified that he found the body two and a half hours before? 22 23 Α No. 24 Okay. So two and a half hours before 10:30 would be Q

a little after 8:00 o'clock; correct? 1 Correct. 2 A So if time of death was around 8:00 o'clock, that 3 4 would mean that this person found the body about the same time that it was killed? 5 6 Well, let's be careful with the phrase the same 7 Because when I say my best time of death estimate is around 8:00 o'clock, again, there's a margin of error 8 of several hours in either direction. That's -- that's my 9 peak confidence estimate. But there's several hours in 10 11 either direction. So the same time implies a degree of precision that I'm not comfortable making. 12 13 Q Okay. So what you just told me about this person that I 14 15 have not heard about before doesn't change my time of 16 death estimate. 17 Now, if that person obviously were a completely 18 reliable witness and they said I saw that guy alive at 19 7:30 and we all knew that to be true, then I'd say, well, 20 then we can chop off that part of my time of death 21 estimate curve because clearly that can't be right. Okay. But now you talked about -- and your report 22 0 says more compelling data arise, talking about the entomology. 23 24 If the entomologists are saying 8:01 to 9:08 p.m., that has

nothing to do with your time of death estimate? 1 2 Well, again, my time of death estimate was pretty much in the 8:00 o'clock ballpark anyway. So if the 3 entomologists are saying 8:00 to 9:00 p.m. -- and again, I 4 assume there's a little margin around that as to what 5 exactly constitutes sunset, but I believe we're in the 6 7 same ballpark. But yours has a margin of error of five to six hours? 8 9 A Correct. Were you asked to look at anything else in 10 11 determining time of death? 12 Not that I recall. 13 If the entomology determination for time of death was 14 much different than yours, which would you go with? 15 I'm having trouble rectifying that hypothetical 16 in my head because I don't know why they would be 17 different. And the second half of my answer is -- I mean 18 it's an odd way to phrase it, but we're not talking about 19 the entomology evidence in this case. We're talking about 20 the lack of entomology evidence, which is I'm not 21 familiar -- before I looked at this case, I didn't know what flies were active at night and which ones weren't. I 22 23 didn't know when flies laid eggs. 24 So I don't know how I would rectify your

hypothetical question if the entomologist said the time 1 2 of -- because normally when they make a time of death estimate, it's based on the stuff that's there, not the 3 stuff that's not there. So I can't reconcile those two 4 5 situations in -- in the form of the question. 6 But in this case, you recognize that the entomology 7 evidence is actually a lack of entomology evidence in making their determination of their time of death? 8 9 Yes. But of course, that doesn't make it useless. There's -- in my discipline, we note things that 10 11 aren't present all the time because their absence is relevant. I'm simply saying that the lack of evidence in 12 13 this case is clearly important to the entomologist. 14 wouldn't be intuitively obvious to me any more than when I document a lack of something on a body that somebody would 15 16 know why I did that or why I thought it was important. 17 But within a discipline, you note the lack of 18 things all the time because they're very pertinent negatives. 19 20 Okay. Thank you. MS. DIGIACOMO: I have nothing further. 21 THE COURT: Redirect? 22 23 24

## 1 REDIRECT EXAMINATION 2 BY MS. POTKIN: 3 Dr. Baker, let's talk a bit about the temperature. You were asked on cross-examination about the fact that it was 4 5 cloudy on July 8th. When you are factoring in the effect of heat on the 6 7 process of rigor, does it make a difference whether it's cloudy or not cloudy? 8 9 Not to my knowledge. I mean, if the ambient temperature is 92 degrees, I don't know why the presence 10 11 or absence of clouds would matter to a dead body. And it's the ambient temperature that is connected 12 13 with the acceleration or causes the acceleration in the rigor 14 process? 15 A Correct. 16 Okay. 17 THE CLERK: Can I ask you not to touch the --18 MS. POTKIN: Oh, the microphone? Sure. BY MS. POTKIN: 19 20 Dr. Baker, I am going to put the bell curve back up 21 to the screen. 22 Now, you talked a bit on cross-examination about the right side of the curve and the fact that the two observations 23 24 between the 4:00 a.m. notation of full body rigor and the

rigor being completely absent at 12:00, noon, was a total of eight hours. And you mentioned the fact that that side of bell curve could even be shorter.

And can you explain -- I think you said at that point it would be helpful to have the curve up to the screen. Can you explain to us how -- how temperature could have affected the right side of the screen in a way that it is even more restricted?

A Sure. So -- can I still draw on this like yesterday?

So this is your 4:00 a.m. observation here. This is your 12:00, noon, observation there. Body went from full body rigor mortis to no rigor mortis by two people who are trained observers, and that happened in only eight hours.

Normally -- and any normal, I mean on the blue curve, it takes you somewhere between 24 and 12 hours to get to that point. But Mr. Bailey's body did it in only eight hours. So to me, that's pretty clear evidence that he's on an accelerated curve, hence the use of the orange curve.

Eight hours could actually be an overestimate for how long it took him to come out of rigor because, A, he could have come out of rigor before this point. We only

know the one point when Dr. Simms started the autopsy. He could have been out of rigor here, even shorter. But we don't know it because nobody observed his body.

What we do know is that at some point in this interval here, he's transported back to the coroner's office, which is presumably a temperate environment. I don't know if he's refrigerated at any point in here as well. But that would also retard the dissipation of rigor mortis, meaning that eight hours could actually be artificially elongated because of a cooler environment, because of refrigeration.

So it could be that this is even less -- I'm pointing at -- you can't see but I'm pointing at it. This whole process can be less than eight hours. I'm assuming that none of those things actually took place, that Dr. Simms examined him at the very moment that a competent observer would say, oh, rigor just ended. I'm assuming there was no refrigeration. I'm assuming the temperature had no bearing to give the broadest window of time of death to be as liberal as I can.

And that's why I say eight hours plus or minus five or six hours in either direction. And by the way, that five or six hours is taken from the blue curve. If we were to actually take that same interval on the orange

curve, it would be more than five or six hours. But again 1 2 I'm being as liberal as I can with time of death. I'm sorry. Can you explain that? If we took the 3 five or six hours that's the center the blue curve, it would 4 be more or less on the red curve? 5 It would be less on the orange curve. 6 A 7 Oh, orange curve? Is it possible to erase what I just drew and then 8 9 I can draw what I just explained? Okay. So again, if we consider for the average person 10 11 that's the 12-hour mark and that's the 24-hour mark, and this the period of time where an observer would say this 12 13 is full body rigor mortis, that's about 12 hours right 14 there between those two points. Okay? 15 Hence, plus or minus six in either direction 16 because you don't know where on this line you are, so it 17 could be six hours in either direction. That same 18 distance on this orange curve is going to be less than 12 19 hours. I can't tell you exactly how much, which is why 20 when I say I think he's been dead about eight hours, I

I hope it's clear. I'm being as liberal as I can when I say, look, this is still a pretty wide window.

still leave the plus or six margin for error on there.

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Q And when you say liberal with regard to the eight

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hours between the time that rigor was observed and the time that is dissipated, that could be shorter based on the fact that he was presumably in cooler temperatures when he was brought to the morgue? Α Correct. And that would have an impact on the process of rigor that has been accelerated by the ambient temperatures? The temperature in the morgue and the temperature in the cooler had he been placed in the cooler would slow down the rigor mortis, artificially making that eight hours longer than it really would have been had it -- had his body just been left in the location where it was found until rigor had completely gone away. I mean, one of the reasons we refrigerate bodies is to retard all of the aspects of decomposition, including rigor mortis. That's why we put them in coolers in the first place. And you were asked to cross-examination about having additional data and potentially a witness reporting having observed the body two and a half hours approximately before notifying -- calling police. Do you consider that in of itself reliable outside data to factor into your time of death determination? Well, I have no independent basis of knowing what

1 was represented to me was -- actually happened. I mean, I'm sure it did. I have no idea who this person was or if 2 they know exactly when they placed that call. But nothing 3 about that scenario is inconsistent with the time of death 4 estimate I gave you. I mean, assuming that call took 5 place shortly after 8:00 p.m., that's around the time that 6 7 I said, you know, his death occurred in that window of time that centered on 8:00 p.m. but could be six hours in 8 9 either direction. So if he was killed at 7:45 p.m., there's nothing 10 11 inconsistent with that time of death with your findings and 12 with the observation of someone seeing him around 8:00 p.m. --13 A That's correct. -- seeing the body around 8:00 p.m.? 14 Q 15 And we don't know if this person was wearing a watch? 16 I don't. Α 17 Dr. Baker, you've testified that time of death 18 estimates are estimates and though, you know, be liberal and give us a broad range and be confident that time of death 19 20 occurred sometime within that range, they are estimates. 21 Is -- given that it is an estimate, if time of death is important in a case, is that all the more reason to consult 22 an outside forensic discipline or try to look for additional 23 24 evidence?

A It -- it certainly would be a major prompt to do that. I mean, certainly in my experience, I always ask the attorneys I'm working with on a homicide case, "Is time of death relevant to you?" Because in the vast of majority of cases, either A, it's not relevant; or B, it's not within my bailiwick to really assist in answering that question.

If I presented with a case where it really would be in my bailiwick to address the question, then you would do your homework. You would get the various theories laid out for you so you could at last say, you know, the observations fit that theory or the observations done fit that theory.

It's not something pathologists dwell on on a day-to-day basis because it's very uncommon in a criminal trial for our time of death estimate to have any meaning to anyone.

Q And you would only know that your -- that time of death is an issue if you're told?

A Correct. And again, most of the homicide cases we deal with, time of death isn't an issue because the person is pronounced dead in the emergency room or the killing is witnessed or it's caught on some form of electronic surveillance like a video or a shot spotter.

1 This is an exceptional case in the sense that time of 2 death appears to be very relevant to all parties 3 concerned. You were asked to cross-examination about changes to 4 the cornea. Is that something that I typically factor in in a 5 time of death determination? 6 7 No. I -- I can't recall ever commenting on the condition of corneas, unless they were injured, in an 8 9 autopsy report. And I'm sure the cornea clouding is -- I 10 mean, it must be subject to changes in environment like 11 anything else because the clouding is a function of the fluid on the outside of your cornea evaporating. 12 13 When you testified yesterday and provided a broad overview, I believe it was the three or four kind of factors 14 15 and postmortem changes that pathologists typically take into 16 account into determining time of death, examination of the 17 cornea was not one of the factors you listed; is that right? 18 Α Correct. 19 And why is that? 20 Again, because, A, we virtually never comment on 21 it or observe it or note it in our reports. And it's probably pointing out that the corneal clouding in 22 Mr. Bailey's case, I'm in the sure how it would be 23

relevant because we already when the coroner's

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investigator got there, he had been dead for five and a 1 half hours because the police had been there since 10:30. 2 So had -- had the investigator noted or not noted 3 corneal clouding and what that observation was, I'm not 4 sure how it would inform my opinion in his case because we 5 know he's been dead for five and a half hours the first 6 7 time a trained investigator looks at him. And when you refute the autopsy report in this case, 8 9 were there specific findings or was -- when you reviewed the 10 autopsy report in this case, were there specific notations 11 regarding the condition of Mr. Bailey's eye, ear, and nose 12 areas? 13 A They -- I'd have to look at the report again to see specifically how Dr. Simms described them, but they 14 15 were certainly documented photographically. 16 One moment, please. 17 MS. POTKIN: I'm handing the witness D -- what was 18 introduced yesterday as Defense Exhibit D -- C. 19 THE WITNESS: Okay. 20 BY MS. POTKIN: 21 With regard to areas where you testified yesterday you may typically see fall eye colonization -- the eyes, the 22 ears, the nose -- did Dr. Simms make any notations regarding 23 24 these areas?

1 Α He -- I can see here he described the eyes. I 2 don't see a specific description of the ears, but of 3 course, they're documented in the photographs. Dr. Baker, would these be areas where typically you 4 would have expected Dr. Simms to know at a time if he saw any 5 evidence of insect activity? 6 7 Α Yes. Whether it's fly eggs, ants, any of the other insects 8 you discussed earlier today? 9 10 Α Yes. 11 Okay. You also testified that entomology is relatively rare, used in relatively few cases in your 12 13 experience. 14 Of the cases where you have conducted autopsies or 15 come through your office, are most of those cases homicides? 16 In my office in a typical year, 4 to 5 17 percent of the cases that we investigate and certify are 18 homicides. So it's a did he have minority. And that's 19 typical for most big city medical examiner's offices. 20 It's going to vary a little bit, obviously, depending on 21 the crime rate in your community. But it's actually minority of our case work. 22 23 And of the cases that are homicides, how many of 24 those approximately is time of death brought to your attention

1 as an issue? 2 Itself very, very rare where anyone is going to hang their hat on my time of death estimation in a 3 criminal proceeding. I -- I -- I would have to rack any 4 brain to think of the last time it happened, if ever. 5 Okay. And because time of death is -- estimates are 6 7 relatively rare, again, if you -- if you -- if time of death is a significant issue in a case, you would want to turn to 8 9 other forensic disciplines for the assistance of other forensics to help determine time of death? 10 11 Certainly if I thought they could bring something 12 to the table, yes. 13 When the Innocence Project reached out to you about this case, you suggested that we speak to Dr. Jeffrey 14 Tomberlin; correct? 15 Yes. I believe -- my memory is that you asked me 16 17 if I knew a good forensic and I said I knew a guy who has 18 a fantastic reputation. I know him in person so I can put you in contact with him. That's my recollection. 19 20 But to answer your question, yes, he is the guy 21 that I recommended. And at the time you were personally -- you considered 22 him a good entomologist because you were familiar with his 23 24 work?

1 Α Yes. I've seen him speak. I've seen the 2 students that he's mentored speak. And would you consider him based on the work that 3 you've seen somebody who employs a scientific process? 4 To the extent that I understand the science of 5 6 entomology, yes, I believe he does it a science. 7 Dr. Baker, in your work as a forensic pathologist, do you -- if you have a trial that you're participating in, do 8 9 you routinely talk with lawyers who are participating in the criminal trial? 10 11 Α Yes. 12 0 And is that prosecutors? 13 Α Yes. And the defense? 14 15 If they make the effort to come to my office and 16 meet with me, yes. 17 And do they do that? 18 Not as often as I would like, although I tell 19 them they should do it every time. My office is 20 completely independent of any prosecutorial or law 21 enforcement agency, so the defense is always free to come meet with me in advance of a hearing or a trial. And I 22 23 will show them the photos, lay out my opinions, answer all 24 their questions. And I encourage them to do that before

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     every trial. It doesn't always happen, I presume because
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     of their caseload or time constraints or perhaps it could
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     just be the pathology is not something they consider
     relevant.
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              But I try to meet with them as much as they want
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     to.
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              And if I defense attorney preparing for trial reaches
     out to a pathologist such as yourself, that attorney could
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     come in and ask you questions about the work that you
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     conducted and even the State's theory in the case?
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         MS. DIGIACOMO: Objection. Relevance.
         THE COURT: I'll allow a little leeway. Sustained.
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         THE WITNESS: I'm sorry. Was I -- am I loud to answer
14
     that?
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         THE COURT: Yes.
16
     BY MS. POTKIN:
17
         Q
              Yes.
18
                   Would you mind repeating the question.
              Well -- withdraw. I'll come back to that.
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         0
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              You testified previously that you haven't consulted
21
     specifically with an entomologist on a case that you were
     working on with regard to time of death. But are you aware
22
23
     that forensic entomologists are available?
24
              Oh, yes, absolutely.
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1 0 And are a -- and are used to establish a time of 2 death in cases? 3 That's one of the things they can do, yes. 4 Okay. Dr. Baker, if a defense attorney came to you 5 on a case that you had conducted the autopsy on and explained 6 to you that the case -- that time of death was a very criminal 7 issue in the case and that the State's theory was that the victim's body had laid out in 80 or 90-degree heat for over 12 8 9 hours next to a Dumpster, covered in garbage, with numerous wounds bleeding and asked you if the crime scene and forensic 10 11 evidence was consistent with the State's theory, what would 12 you say? 13 So certainly the crime scene and the Α 14 evidence could be consistent with everything you just 15 described. I'm not a crime scene investigator specialist. 16 But you also said the body had laid outside in that 17 environment for what period of time was the theory, the 18 hypothetical? Over 12 hours? 19 20 So that would certainly be inconsistent with my 21 time of death estimate if we're using the same observations and parameters that we've been using in 22 Mr. Bailey's case. And so then I would scratch my head 23 24 and say, well, that -- that theory is not consistent with

my findings. You may want to consult some other forensic experts, you know, possibly even an entomologist, although I didn't see anything on this body that looks to me to be of insect activity. But the theory that you're giving me as a hypothetical doesn't fit the observations I've been provided or my understanding of the postmortem changes of a body in an environment that warm.

Q And if a defense attorney came to you and gave the same set of facts and specifically asked you, is there another forensic discipline that could be helpful to narrow the time of death, what would you advise that attorney?

A I would say an anthropologist is probably not going to be helpful. You might consult an entomologist and see if they see anything in these photos that's useful or if there isn't anything in these photos that they see useful.

Q Dr. Baker, is there anything that you observed in the autopsy report, crime scene -- or coroner's report and photographs, all of the evidence that you reviewed in this case, is there anything that suggests that Mr. Bailey's time of death may have been in the early morning hours of July 8th?

A No. I would say that that is vanishingly unlikely based on the rigor mortis observed in his body for all the reasons I've discussed over the last two days.

1	Q And is all of the forensic evidence that you've					
2	reviewed consistent with the time of death that's in the late					
3	afternoon or evening of July 8th?					
4	A Yes.					
5	MS. POTKIN: Thank you.					
6	THE COURT: Anything else by the State?					
7	MS. DIGIACOMO: Yes.					
8						
9	RECROSS-EXAMINATION					
10	BY MS. DIGIACOMO:					
11	Q All right, sir. So you said that forensic					
12	entomologists can establish time of death or help establish					
13	time of death.					
14	A They can help, yes.					
15	Q Okay. And actually, forensic entomologists normally					
16	deal with what's called PMI; correct?					
17	A By PMI, you mean postmortem interval?					
18	Q Correct.					
19	A Yes.					
20	Q That's really what they deal with, not pinpointing an					
21	exact time of death; correct?					
22	A Correct. I'm unaware of any science that can					
23	pinpoint an exact time of death.					
24	Q Correct. And in fact, even though you believe your					

time of death estimate to be correct, it is possible that you're wrong; correct?

A It's always possible that I'm wrong.

Q You talked about if you know time of death is an issue, it's because you're told when you're doing the autopsy, you have the body. Is that what you were saying?

A No. I think the way the question was framed is when you're meeting with attorneys about a case, would it be useful to know if time of death is an issue. And I would say yes because it's not something we typically think about, typically dwell on.

And again, I'll use Mr. Bailey's case as an example. He has an extraordinary number of injuries on his body. When you or forensic pathologists are getting ready to testify in a case like this, you're trying to keep all these injuries straight in your head, how many were there, which ones were the worst, what organs did they go through, whether it was a blunt force or sharp force injury. You don't spend a lot of time preparing for to testify about the time of death because it's not something you generally get asked about.

So it's really helpful to know in advance if that's going to be an issue for either side because then at least you can do your homework, you can consult the

1	relevant	literature, you can look at aspects of the case					
2	that you	might not normally think are important because,					
3	again, you're focusing on all of his injuries. Your						
4	primary	job is to figure out why the person died, not when					
5	the pers	on died.					
6		And it's very rare that we get asked with					
7	specific	ity when that person died.					
8	Q	So it based upon what you just said, it is					
9	possible	that that actually occurred to Dr. Simms at the					
10	prelimin	ary hearing, that he didn't know he was going to be					
11	asked ab	out time of death?					
12	A	I think he specifically testified that he was					
13	told it wouldn't be an issue.						
14	Q	He was told time a death wasn't an issue?					
15	A	Was not.					
16	Q	Right. And then he was asked about it?					
17	А	Correct.					
18	Q	Okay. And so between the time of preliminary hearing					
19	and tria	l, now that he knows, he has time to think about it					
20	and figu	re it out as you said and be more prepared for it?					
21	A	I would have to defer to him as to whether he					
22	actually	had the time to do that and if he did.					
23	Q	But that's what you would do?					
24	A	Correct.					

```
1
         MS. DIGIACOMO: I have nothing further.
 2
         THE COURT: Anything else?
         MR. SULTAN: Court's indulgence. One moment, please.
 3
 4
         THE COURT: Doctor, you indicated you were contacted
 5
     by the Innocence Project to review this case; is that
 6
     right?
 7
         THE WITNESS: Yes.
         THE COURT: Have you worked with the Innocence Project
 8
 9
     on other cases?
10
         THE WITNESS: Not the main office in New York City. I
11
     was previously on the board of directors for the Minnesota
     Innocence Project, but that was primarily for fundraising
12
     and outreach and education. I didn't -- I never was
13
14
     involved in a criminal trial.
15
         THE COURT: This is the first time you've ever had to
16
     testify on behalf of Innocence Project?
17
         THE WITNESS: Yes.
18
         THE COURT: Okay. Thank you.
19
              Anything else?
20
         MS. POTKIN: Just one last question.
21
22
                    FURTHER REDIRECT EXAMINATION
     BY MS. POTKIN:
23
24
              Dr. Baker, the opinion that you've expressed in your
```

```
1
     testimony both today and yesterday, are those offered to a
 2
     reasonable degree of scientific probability?
              So those terms are no longer en vogue to answer
 3
 4
     questions to a reasonably -- so let me give you my answer.
 5
     I am confident enough in my opinion that I would give it
 6
     in sworn testimony in open court.
 7
         MS. POTKIN: Okay. Thank you.
         THE COURT: Is the doctor free to go?
 8
 9
         MS. DIGIACOMO: Just lastly.
10
11
                    FURTHER RECROSS-EXAMINATION
     BY MS. DIGIACOMO:
12
13
              But you admit it's your opinion and you could be
14
     wrong?
15
              That's true in virtually all of medicine.
16
     could be wrong.
17
         MS. DIGIACOMO: Nothing further.
18
         MS. POTKIN: No.
19
         THE COURT: Can the doctor go?
20
         MS. POTKIN: Yes.
         THE COURT: Thank you, Doctor.
21
22
         THE WITNESS: Thank you, your Honor.
         THE COURT: Okay. So I need to give my staff a little
23
24
     bit of a break. We've been in court all morning.
```

# Andrew Baker, MD Testimony log (updated 1/2/2021)

		/			sterise bono Date						
	dintiff Dets	orse.	/ & /	ainal	bono						
18/	91, Ost	euz <sub>o</sub>	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	11. 64	Date	Case Name	Attorney	Firm	Туре	Dep	Trial
	х				6/6/19	Bergman	Hurbis, Steven	McKeen and Associates	civil	Υ	
	х				6/14/19	Naquin	Coles, Miriam	Henry Buchanan, PA	civil	Υ	
			Х		5/8/20	Negroponte	Jezic, Andrew	Jezic and Moyse	criminal		Υ
			Х	х	1/7/20	Winkel	Cook, Erica Nichols	Iowa Public Defender	criminal		Υ
х					2/26/19	Wyckoff	Bradley, Brent	Walborsky & Bradley	civil	Υ	
	х				6/27/19	Hartman	Redden, Charles	Cunningham, Meyer and Vedrine	civil	Υ	Υ
	х				12/4/18	Heim-Arnold	Horner, Chip	Hart Wagner, LLP	civil	Υ	
	х				12/1/17	Brake-Santiago	Ingram, Charles	Estes Ingram Foels & Gibbs P.A.	civil	Υ	
	х				7/27/18	Pappas	Guise, Clay	Dykema Gossett	civil	Υ	
	х					Wigington	Rhoades, Eric	Armstrong et al, Rockville, MD	civil	Υ	
	х				4/2/15		Seale, Ken	Cunningham, Meyer and Vedrine	civil	Υ	
			Х		9/22/17	Mass		Pinix and Soukup	criminal		Υ
	х				5/25/16	Turner	Welch, Brian	Cassem, Tierney, Adams, Gotch, Douglas	civil	Υ	
			Х		5/17/17		Vanderpool	Vanderpool	criminal	Υ	
	х					Norman	•	Mayfield, Turner, O'Mara & Donnelly, P.C.	civil	Υ	
			Х	х	12/15/16	Lobato	Potkin	Innocence Project	criminal		Υ
	х				12/12/14		Maloon, Jeffrey	Ohio Attorney General	civil		Υ
			Х			Wagoner	Bateh, Michael	Jacksonville PD	criminal	Υ	
			Х			Saldana	,	USVI Public Defender	criminal		Υ
Х						Jackson	Gutzler, Michael	Gutzler	civil		Υ
	Х					Thomas	Redden, Charles	Cunningham, Meyer and Vedrine	civil	Υ	Υ
	Х					Baldi (Miller)		Finley, Alt, Smith, Des Moines, IA	civil		Υ
			Х			Owens	Snodgrass, Lora	Snodgrass	criminal		Υ
	Х						Schedler, Karl	Ohio Attorney General	civil	Υ	
	Х					Miller v Fairmont	,	Steptoe & Johnson	civil	Υ	
	Х					lowa v Baldi		Finley, Alt, Smith, Des Moines, IA	criminal	Υ	Υ
	Х					Watson v. Rosenberg	Johns, Julye	Huff, Powell, and Bailey	civil	Y	
	Х					Cronkwright v. Baldi		Finley, Alt, Smith, Des Moines, IA	civil	Y	
	Х					Camara		Ohio Attorney General	civil	Y	
	Х			l	3/10/10	Boner v Pella et al	Harris, Fredrick	Finley, Alt, Smith, Des Moines, IA	civil	Υ	Υ

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Х				2/4/10	Helms, Curtis	Sibbernsen, Terry	Sibbernsen and Strig	civil	Υ	Υ
			Х	1/1/10	Sgt Boz	US Army	US Army	criminal		Υ
	Х			1/7/09	James Jaycox	Harris, Fredrick	Finley, Alt, Smith, Des Moines, IA	civil	Υ	Υ
	Х			9/17/08	Koby Joe-Tahy	Holden, Scott	Holden and Armer, Tempe, AZ	civil	Υ	
	Х			12/2/07	Ashby v. Uptmor	Miller, Charles	Lane and Waterman, Davenport, IA	civil	Υ	
	Х			4/1/07	Bristman	McIntyre, Marty	Seltzer Caplan, San Diego, CA	civil	Υ	
			Х	3/1/07	US v. Magincalda	Studenka, Michael	US Navy	criminal		Υ
	Х			1/23/06	Wierschke v. Martin	Miller, Charles	Lane and Waterman, Davenport, IA	civil	Υ	
		Х		2/1/03	US v. Peterson	Chrisfield, Julia	US Navy	criminal		Υ

### Note(s)

- (1) This represents the times I have given sworn testimony in my capacity as a private consultant.
- (2) The civil cases represent a mixture of medical malpractice, product liability, and in-custody deaths.
- (3) Some of the "trials" for criminal procedeeding were hearings of one kind or another.
- (4) The "date" recorded is the date I started working on the case, not the date of the testimony.

# Curriculum Vitae

# Andrew M. Baker, M.D.

Chief Medical Examiner—Hennepin, Dakota, and Scott Counties

### **Contact Information**

Hennepin County Medical Examiner's Office 530 Chicago Avenue Minneapolis, Minnesota 55415

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http://www.hennepin.us/me

http://mncmea.org/



## Education

1992	M.D.	University of Iowa College of Medicine, Iowa City, Iowa
1988	B.S.	University of Iowa, Iowa City, Iowa

# Post-Graduate Training

1997-1998	Fellow in Forensic Pathology	Hennepin County Medical Examiner's Office, Minneapolis, Minnesota
1993-1997	Resident in Pathology (Chief Resident, 1996-1997)	University of Iowa Hospitals and Clinics, Iowa City, Iowa
1992-1993	Surgical Internship	University of Iowa Hospitals and Clinics, Iowa City, Iowa

2004-present	Chief Medical Examiner	Hennepin County Medical Examiner's Office, Minneapolis, Minnesota
2002-2004	Assistant Chief Medical Examiner	Hennepin County Medical Examiner's Office, Minneapolis, Minnesota
2001-2002	Chief Deputy Medical Examiner	Office of the Armed Forces Medical Examiner, Armed Forces Institute of Pathology, Washington, DC
2000-2001	Staff Pathologist	Department of Pathology, National Naval Medical Center, Bethesda, Maryland
1999-2001	Deputy Medical Examiner	Office of the Armed Forces Medical Examiner, Armed Forces Institute of Pathology, Washington, DC
1998-1999	Associate Medical Examiner	Office of the Armed Forces Medical Examiner, Armed Forces Institute of Pathology, Washington, DC

# Military Service

Major, United States Air Force

1998-2002

# Board Certification (American Board of Pathology)

Forensic Pathology	9/19/99
Anatomic and Clinical Pathology	6/11/97

# **Additional Appointments**

2004-present Assistant Professor Department of Laboratory Medicine and Pathology, University of Minnesota, Minneapolis, Minnesota

### Licensure

<u>State</u>	<u>Date</u>	<u>Status</u>	<u>Number</u>	Renewal date
Minnesota	3/97	Active	39542	7/31/21
Maryland	4/99	Inactive	D0054565	

### **Professional Associations**

### National Association of Medical Examiners, Fellow

- Past Presidents Committee, 2013-present
- Chair, Standards Committee, 2013-2017
- Strategic Planning Committee, 2010-2013, 2015-2020
- Chair, Board of Directors, 2013
- President, 2012
- Vice President, 2011
- Executive Committee, 2011-2013
- Board of Directors, 2006-2013
- Membership and Credentials Committee, 2010
- Subcommittee on Position Papers, 2010
- Nominating Committee, 2010, 2017, 2018, 2019
- Ad hoc committee on Medical Examiner Independence, 2011

### American Academy of Forensic Sciences, Fellow

- Executive Committee, 2016-2019
- Board of Directors, 2016-2019
- Chair, Forensic Science Foundation, 2016-2020
- Diversity Outreach Committee, 2017-2020
- Medicolegal Consensus Body, Academy Standards Board, 2016-2020
- Chair, AAFS Annual Meeting Program Committee, 2015-2016
- Co-Chair, AAFS Annual Meeting Program Committee, 2014-2015
- Chair, Emerging Forensic Scientist Award Subcommittee, 2014-2016
- Trustee, Forensic Science Foundation, 2013-2020
- Emerging Forensic Scientist Award Subcommittee, 2013-2014
- Chair, Continuing Education Committee, 2009-2018
- Nominating Committee, 2008-2009
- Chair, Pathology/Biology section, 2007-2008
- Secretary, Pathology/Biology section, 2006-2007
- Luncheon Program Chair, 2006-2007
- Scientific Session Program Chair, Pathology/Biology section, 2004-2005

### College of American Pathologists, Fellow

Forensic Pathology Committee, 2014-2019

### Professional Associations (continued)

### Minnesota Coroners' and Medical Examiners' Association

- Treasurer, 2007-present
- Board of Directors, 2002-present
- Vice President, October 2003-October 2004
- 2005 Annual Meeting Program Chair

## **Previous Affiliations**

State of Minnesota Ombudsman Committee for Mental Health and Developmental Disabilities, 2008-2020

Member (NAME Representative), Forensic Science Standards Board (FSSB), National Institute of Standards and Technology (NIST), Organization of Scientific Area Committees (OSAC), 2014-2016

Editorial Board, *Academic Forensic Pathology* (Formerly the official publication of the National Association of Medical Examiners), 2011-2016

• Guest editor, Volume 5 (3), published September 1, 2015

Scientific Working Group for Disaster Victim Identification (SWGDVI), National Institute of Justice, 2012-2014

American Board of Pathology Test Development and Advisory Committee (Forensic Pathology), 2006-2013

Innocence Project of Minnesota (http://www.ipmn.org/), Board of Directors, 2008-2011

Minnesota Science Standards Revision Committee, Minnesota Department of Education, 2008-2009

National Disaster Medical System Disaster Mortuary Operational Response Team (DMORT), Medical Officer (Pathology), Region V, 2003-2009

### **Teaching**

- Faculty Member, Jay Dix Memorial Bonus Day (Firearm Injuries). American Academy of Forensic Sciences Meeting, Anaheim, CA, February 20, 2020.
- New England Seminar in Forensic Sciences, Colby College, Waterville, Maine, July 28-31, 2019.
  - The I-35W Bridge Collapse in Minneapolis
  - Evaluation of Pediatric Fractures at Autopsy
  - Unusual Child Deaths
  - The Pathology of the American Airlines Flight 77 Crash into the Pentagon
- Guest Lecture, A Chief Medical Examiner's View of Drug Fatalities. University of Minnesota School of Social Work, June 20, 2019.
- Faculty Member, Jay Dix Memorial Bonus Day (Firearm Injuries). American Academy of Forensic Sciences Meeting, Baltimore, MD, February 22, 2019.
- Faculty Member, Jay Dix Memorial Bonus Day (Firearm Injuries). American Academy of Forensic Sciences Meeting, Seattle, WA, February 22, 2018.
- Faculty Member, Child Abuse: A Multidisciplinary Approach workshop, American Academy of Forensic Sciences Annual Meeting, New Orleans, LA, February 13, 2017.
- Guest Lecturer, International Association of Homicide Investigators Northern Region Training, Minneapolis, MN, November 7, 2013.
- Workshop Chairman, Bones and Children: An Interdisciplinary Approach to Forensic Issues, American Academy of Forensic Sciences Annual Meeting, Washington, DC, February 18, 2013.
- Guest Faculty/Keynote Speaker, Michigan Association of Medical Examiners Annual Fall Conference, Michigan Association of Medical Examiners, Mt Pleasant, MI, November 9-11, 2012.
- Guest Faculty/Keynote Speaker, 39th Annual Educational Conference, Florida Association of Medical Examiners, Clearwater Beach, FL, July 11-13, 2012.
- Workshop Chairman, Bones and Children: An Interdisciplinary Approach to Forensic Issues, American Academy of Forensic Sciences Annual Meeting, Chicago, IL, February 21, 2011.
- Guest Faculty Member, Advances in Forensic Medicine and Pathology, University of Michigan Department of Pathology, Plymouth, MI, May 5, 2010.
- Faculty Member, Jay Dix Memorial Seminar, Pathology/Biology Section, American Academy of Forensic Sciences Annual Meeting, Denver, CO, February 20, 2009.
- Faculty Member, Young Forensic Scientists Forum, American Academy of Forensic Sciences Annual Meeting, Denver, CO, February 17, 2009.
- Faculty Member, Pediatric Forensic Medicine. American Academy of Forensic Sciences (AAFS) workshop, AAFS Annual Meeting, Denver, CO, February 16, 2009.

- Guest Faculty/Keynote Speaker, 20<sup>th</sup> Annual John R. Teggatz Forensic Science Seminar, Milwaukee, WI, November 5-6, 2008.
- Guest Lecturer, Harvard University Law School *Criminal Law* course, Cambridge, MA, April 16, 2008.
- Guest Instructor, Federal Bureau of Investigation Indian Country Unit Homicide Course, Minneapolis, MN, April 14, 2008.
- Faculty, American Society for Clinical Pathology Teleconference #4060, *Investigating Asphyxial Deaths in Infants and Small Children*, March 14, 2008.
- Guest Instructor, *Child Abuse and the Law* course, Hamline University School of Law, St. Paul, MN, February 28, 2008.
- Faculty Member, Current Topics in Pediatric Forensic Medicine: Beyond Abusive Head Trauma. American Academy of Forensic Sciences (AAFS) workshop, AAFS Annual Meeting, Washington DC, February 18, 2008.
- Faculty Member, *Masters Conference for Advanced Death Investigation*, Saint Louis University School of Medicine, Department of Pathology, Division of Forensic and Environmental Pathology, July 23-36, 2007.
- Co-director, 12<sup>th</sup> Forensic Science Educational Conference, American Academy of Forensic Sciences and Hamline University, St. Paul, MN, June 21-23, 2007.
- Guest Instructor, *Criminal Law* class, University of Minnesota Law School, Minneapolis, MN, January 26, 2007 and April 17, 2006.
- Faculty Member, 10<sup>th</sup> Annual *Pediatric Forensic Issues: Pathology, Diagnosis, Imaging and Investigation*, Institute for Pediatric Medical Education and The Society for Pediatric Pathology, Orlando, Florida, December 6-9, 2006.
- Guest Faculty Member, Iowa Association of County Medical Examiner's Annual Meeting, Des Moines, Iowa, November 10-11, 2006.
- Faculty Member, 9<sup>th</sup> Annual *Pediatric Forensic Issues: Pathology, Diagnosis, Imaging and Investigation*, Institute for Pediatric Medical Education and The Society for Pediatric Pathology, Anaheim, California, November 30 December 3, 2005.
- Instructor, National Transportation Safety Board Conference, Transportation Disaster Response Mass Fatality Incidents for Medicolegal Professionals, NTSB Academy, Ashburn, Virginia, May 9-12, 2005.
- Faculty Member, National Disaster Medical System Conference, *Catastrophic Care for the Nation*, Orlando, Florida, April 30 May 4, 2005.

- Faculty Member, 8th Annual Pediatric Forensic Issues: Pathology, Diagnosis, Imaging and Investigation, Institute for Pediatric Medical Education and The Society for Pediatric Pathology, Orlando, Florida, December 1-4, 2004.
- Faculty Member, National District Attorneys Association ChildPROOF course, National Advocacy Center, University of South Carolina, March 22-24, 2004.
- Faculty Member, 7th Annual Pediatric Forensic Issues: Pathology, Diagnosis, Imaging and Investigation, Institute for Pediatric Medical Education and The Society for Pediatric Pathology, Orlando, Florida, December 3-6, 2003.
- Guest Lecturer, Hamline University Introduction to Medico-Legal Death Investigation course, St. Paul, Minnesota, June, 2003.
- Guest Faculty Member, Minneapolis Police Department Advanced Homicide Investigation Seminar, Bloomington, Minnesota, April 21-24, 2003.
- Faculty Member, 6th Annual Pediatric Forensic Issues: Pathology, Diagnosis, Imaging and Investigation, Institute for Pediatric Medical Education and The Society for Pediatric Pathology, Orlando, Florida, December 4-7, 2002.
- Faculty Member, 5th Annual Pediatric Forensic Issues: Pathology, Diagnosis, Imaging and Investigation, Institute for Pediatric Medical Education and The Society for Pediatric Pathology, Orlando, Florida, December 3-6, 2001.
- Course Director, Principles of Forensic Pathology, George Washington University/Armed Forces Institute of Pathology Masters of Forensic Sciences Program, Spring and Fall semesters, 2001; Spring semester, 2002.
- Course Director, Armed Forces Institute of Pathology Basic Forensic Pathology course, Bethesda, Maryland, November 12-16, 2001.
- Guest Faculty Member, United States Army Judge Advocate General's School, Criminal Law New Developments Course; Charlottesville, Virginia; November 6-9, 2001.
- Adjunct Faculty Member, Naval Justice School, Defense Capital Litigation, Newport Naval Station, Newport, Rhode Island, July 17-18, 2001.
- Adjunct Faculty Member, Naval Justice School, Government Capital Litigation, Newport Naval Station, Newport, Rhode Island, May 21-23, 2001.
- Adjunct Faculty Member, Defense Institute of International Legal Studies, War Crimes Investigation and Prosecution: Seminar for Members of the Iraqi National Congress, Newport Naval Station, Newport, Rhode Island, November 13-17, 2000.

### **Honors and Awards**

Milton Helpern Award, Pathology-Biology Section, American Academy of Forensic Sciences, February 21, 2018

Kenneth S. Field Award of Appreciation, American Academy of Forensic Sciences, February 21, 2018

Community Leadership Award, Hennepin County Attorney's Office, October 26, 2016

STAR (Service—Time—Attitude—Respect) Award, National Association of Medical Examiners, 2014

Outstanding Service Award, National Association of Medical Examiners, 2013

Hennepin County Star Performer Administrator's Award, Hennepin County, Minnesota, 2013

Champions of Change Award, Hennepin County, Minnesota, 2012

Teacher of the Year, Anatomic Pathology Division, Department of Laboratory Medicine and Pathology, University of Minnesota, 2010

Distinguished Alumni Award, Mason City High School, Mason City, Iowa, 2002

Department of Defense, Defense Meritorious Service Medal, 2002

Department of Defense, Joint Service Commendation Medal, 2001

Department of Defense, Joint Meritorious Unit Award, Armed Forces Institute of Pathology, Washington, DC, 2000

Distinguished Graduate, Commissioned Officer Training, Maxwell AFB, Alabama, United States Air Force, 1998

George D. Penick Award for Excellence in Education, Department of Pathology, University of Iowa Hospitals and Clinics, 1997

Alpha Omega Alpha Honor Medical Society, Spring 1991

W. R. Ingram Neuroscience Award, Department of Anatomy, University of Iowa College of Medicine, 1989

University of Iowa USA Scholar, 1987-88

University of Northern Iowa Social and Behavioral Sciences Scholarship, 1985-86

Eagle Scout, Boy Scouts of America, 1983

### **Invited Presentations**

- Drug Fatalities—America's 'Other' Epidemic: A Medical Examiner's Perspective. Minnesota Osteopathic Medical Society Fall Conference, October 4, 2020.
- Pediatric Postmortem Toxicology Case Studies, American Academy of Forensic Sciences Toxicology Section, February 21, 2020.
- Challenges in the Investigation and Certification of Drug-Related Fatalities. Minnesota County Attorneys Association 42<sup>nd</sup> Annual Meeting. Bloomington, MN, December 6, 2019.
- Death Investigation in America, in Minnesota, and in Hennepin County. Humphrey School of Public Affairs (University of Minnesota)-Hennepin County Visiting Fellows Program, December 5, 2019.
- International Guest Speaker, Royal College of Pathologists of Australasia Interim Meeting, November 15-17, 2019, Queenstown, New Zealand.
  - AB Pearson Memorial Lecture: Attack on American Airlines Flight 77 and the Pentagon
  - Unusual Child Deaths
  - Drug-related Deaths
  - Sudden cardiac death—it's more than just garden-variety coronary atherosclerosis!
  - Pathology of Firearms Injuries
- Guest Speaker, Iowa Association of County Medical Examiners, November 1-2, 2019, Des Moines, Iowa.
  - The Pathology of Mass Disasters: The 9-11 Attack on the Pentagon and the I-35W Bridge Collapse in Minneapolis
  - Pediatric Asphyxial Deaths
- The I-35W Bridge Collapse in Minneapolis. Lifesource (Organ, Eye and Tissue Donation) 2017 'Spark' Symposium. Shakopee, MN, October 24, 2019.
- The Exoneration of Kirstin Blaise Lobato. Minnesota Coroners' and Medical Examiners' Association, October 4, 2019.
- Barway Collins: A Missing Child, A Murdered Son. National Latino Peace Officers Association Annual Conference, St. Paul, MN, September 6, 2019.
- The 9-11 Attack on the Pentagon and the I-35W Bridge Collapse in Minneapolis. International Association of Coroners and Medical Examiners 2019 Annual Training Symposium, Las Vegas, Nevada, July 22, 2019.
- Safe Sleep for Infants: The Medical Examiner Perspective. Department of Pediatrics Grand Rounds, University of Minnesota, July 17, 2019.
- Invited *Provocateur*." Alliance for Innovation: Transforming Local Government—BIG Ideas Meeting. Austin, Texas, October 26-28, 2018.
- The Opioid Crisis: A Medical Examiner Perspective (plenary speaker). Society of Forensic Toxicologists Annual Meeting. Minneapolis, Minnesota, October 10, 2018.
- The 'Perfect Storm': The Opioid Epidemic & Medicolegal Death Investigation in America. Centers for Disease Control and Prevention, National Center for Emerging and Zoonotic Infectious Diseases. Atlanta, Georgia, October 3, 2018.

- The Pathology of Firearms Injuries. Minnehaha County Coroner/Medical Examiner Annual Forensic Pathology Conference. Sioux Falls, South Dakota, October 1, 2018.
- Sixteenth International Conference on Shaken Baby Syndrome/Abusive Head Trauma, Orlando, Florida, September 16-18, 2018
  - Detection, Documentation, and Interpretation of Fractures in the Deceased Infant and Small Child: The Autopsy Perspective (keynote speaker)
  - Cognitive Bias in Forensic Pathology: What It Is, What It Is Not, and Why You Need to Care
- The Radiographic, Gross, and Microscopic Evaluation of Fractures in the Deceased Infant and Small Child (keynote presentation). Harris County Institute of Forensic Sciences Topics in Forensic Sciences Conference. September 12, 2018.
- Report From the Front Lines of the Opioid Crisis (speaker/panelist). The 53<sup>rd</sup> Annual Criminal Justice Conference. Minnesota Continuing Legal Education Conference Center, Minneapolis, MN, August 22, 2018.
- Sudden Infant Death and Unsafe Sleep: The Medical Examiner Perspective. Hennepin Health Care-Hennepin County Medical Center Department of Pediatrics Grand Rounds, August 16, 2018.
- Attack on American Airlines Flight 77 and the Pentagon: Identification and Pathology. Federal Bureau of Investigation (Minneapolis Division) employee conference, Bloomington, MN, August 15, 2018.
- Canadian Association of Pathologists/Association canadienne des pathologists 69th Annual Meeting, Quebec City, QC, Jul 9, 2018
  - Detection and Documentation of Fractures in the Deceased Infant and Small Child
  - Unusual Child Deaths
- University of Ottawa And The Eastern Ontario Regional Laboratory Association Third Annual Conference Forensic And Pediatric Pathology: "The Controversial, the Subtle and the Obscure," Ottawa, Canada, June 14-16, 2018
  - Cognitive Bias in Forensic Pathology
  - Death Investigation Systems: Comparison of the Coroner's System with the Medical Examiner's System (panel discussion)
  - Detection and Documentation of Pediatric Fractures
  - Unusual Child Deaths
- University of Minnesota Medical School "Child Abuse Summit: Tips from the Team," April 26-27, 2018, Minneapolis, MN.
  - Microscopic, Gross, and Radiographic Evaluation of Pediatric Fractures at Autopsy
  - Case Study: A Missing Child, A Murdered Son (With Amy Sweasy and Stephanie Revering)
- Death Investigation and the Opioid Epidemic: A Medical Examiner's Perspective. Mayo Clinic, Transplant Grand Rounds. Rochester, MN, April 23, 2018.

- Opioid-related Deaths. Minnesota Bureau of Criminal Apprehension 2018 Death Investigation Conference. Nisswa, MN, April 12, 2018.
- Working With Medical Examiners: Time and Manner of Death. National Association of Criminal Defense Lawyers. "Reinvestigating and Litigating Post-Conviction Innocence Claims." Memphis, TN, March 22, 2018.
- Death Trends and the Opioid Epidemic: A Medical Examiner's Perspective. Lifesource (Organ, Eye and Tissue Donation) 2017 'Spark' Symposium. Bloomington, MN, October 26, 2017.
- Opioids and Death Investigation: A "Perfect Storm." National Institute of Justice Forensic Technology Center of Excellence (live webinar, 'Opioid Crisis A Public Health Enemy Webinar Series'), October 3, 2017.
- Be Careful What You Go Looking For. Minnesota Coroners' and Medical Examiners' Association, September 29, 2017.
- Opioids, Death Investigation, and Medical Examiners: "The Perfect Storm." National Network of Criminal Justice Coordinating Councils. Minneapolis, MN, June 27, 2017
- From Quincy to CSI: The History and Future of Death Investigation in America. Minnesota Academy of Medicine, St. Paul, MN, April 4, 2017.
- International Guest Speaker, Royal College of Pathologists of Australasia "Pathology Update 2017," February 23-24, 2017, Sydney, New South Wales, Australia.
  - Gross and Microscopic Evaluation of Infant and Young Child Fractures at Autopsy
  - Cognitive Bias in Forensic Pathology: What It Is, What It Is Not, and Why You Should Care
  - Attack on American Airlines Flight 77 and the Pentagon
  - The I-35W Bridge Collapse in Minneapolis
- Cognitive Bias in Forensic Pathology: What It Is, and What It Is Not (and why you need to care). Ontario Forensic Pathology Service, Toronto, Ontario, Canada, February 6, 2017.
- The Intersection of Organ Donation, Law, Cutting-edge Life Saving Medicine, and Death Investigations (with Julie Labloski and Amy Sweasy). Minnesota County Attorneys Association 39<sup>th</sup> Annual Meeting, Bloomington, MN, December 8, 2016.
- Microscopic, Gross, and Radiographic Evaluation of Pediatric Fractures at Autopsy. University of Minnesota Children's Hospital 2016 Pediatric Trauma Update Conference. Minneapolis, MN, November 11, 2016.
- Setting the Bar: The Murders of Palagor Jobi and Anarae Schunk. (Panel presentation with Dawn Johnson, Holly Long, Lorren Jackson MD, John Winters, and Kathy Keena). Minnesota Coroners' and Medical Examiners' Association, October 28, 2016.
- Cognitive Bias in Forensic Pathology: What It Is, and What It Is Not. Minnesota Coroners' and Medical Examiners' Association, October 27, 2016.
- Death Investigation, Death Certification, and "Cognitive Bias" in Forensic Pathology. Fourth Judicial District Judges, Minneapolis, MN, October 14, 2016.
- Gross and Microscopic Evaluation of Fractures in the Autopsy of Infants and Small Children. Grand Rounds, Department of Pathology, University of Iowa, Iowa City, Iowa, October 13, 2016.

- The 9-11 Attack on American Airlines Flight 77 and the Pentagon. Pathology residents, Department of Pathology, University of Iowa, Iowa City, Iowa, October 13, 2016.
- Mass Fatalities: The Minneapolis I-35W Bridge Collapse and the 9-11 Attack on the Pentagon. Keynote presentation at the Ohio State Coroners Association 71st Annual Education Conference. Cleveland, OH, May 6, 2016.
- One Night in August: The I-35W Bridge Collapse in Minneapolis. Minnesota Osteopathic Medical Society, Bloomington MN, April 29, 2016.
- Cognitive Bias in Forensic Pathology: What It Is, and What It Is Not. Southern Minnesota Regional Medical Examiner's Office 2<sup>nd</sup> Annual Forensic Science Symposium. Mayo Clinic, Rochester, MN, March 25, 2016.
- Documentation and Interpretation of Firearm Injuries. American College of Veterinary Pathologists Annual Meeting. Minneapolis, MN, October 20, 2015.
- What the Medical Examiner Wished Every Judge (and Prosecutor and Defense Attorney) Knew. New Mexico State Bar "More Reasons to Be Skeptical of Expert Witnesses" symposium. Albuquerque, New Mexico, October 16, 2015.
- Death Investigation in America and Minnesota: What the Medical Examiner Wished Every Judge Knew. Minnesota District Judges Association and Minnesota District Judges Foundation Annual Meeting and Fall Educational Conference. Brainerd, MN, September 11, 2015.
- Good Death Investigation Promotes Good Health. YMCA Youth in Government Youth Conference on State Issues. Minneapolis MN, June 18, 2015.
- Unusual Child Deaths. Advances in Forensic Medicine and Pathology Conference, University of Michigan Medical School, Department of Pathology, Ann Arbor MI, May 7, 2015.
- Fracture Evaluation in the Deceased Infant. Advances in Forensic Medicine and Pathology Conference, University of Michigan Medical School, Department of Pathology, Ann Arbor MI, May 7, 2015.
- Mass Disaster Management: The Minneapolis Bridge Collapse. Advances in Forensic Medicine and Pathology Conference, University of Michigan Medical School, Department of Pathology, Ann Arbor MI, May 6, 2015.
- Death Investigation and Death Certification. Minnesota Osteopathic Medical Society, Bloomington MN, April 17, 2015.
- Speaking for the Dead: The Medical Examiner and the Investigation of Death. Alumni in Residence Program (http://wp.stolaf.edu/pipercenter/alumni-in-residence/), St. Olaf College, Northfield MN, March 19, 2015.
- History, Cognitive Bias, Incompetence, and Corruption Are Not the Same Things. American Academy of Forensic Sciences Annual Meeting, Plenary Session, Orlando, FL, February 18, 2015.
- Attack on American Airlines Flight 77 and the Pentagon; Identification and Pathology. National Forensic Academy, University of Tennessee, Nashville, TN, January 27, 2015.
- Pathology of Gunshot Wounds. National Forensic Academy, University of Tennessee, Nashville, TN, January 27, 2015.

- Death Investigation in America, in Minnesota, and in Hennepin County. Humphrey School of Public Affairs (University of Minnesota)-Hennepin County Visiting Fellows Program, October 2, 2014.
- Speaking for the Dead: A Medical Examiner's Perspective. The Program in Human Rights and Health, School of Public Health, University of Minnesota, November 12, 2013.
- Death Investigation in America, in Minnesota, and in Hennepin County. Humphrey School of Public Affairs (University of Minnesota)-Hennepin County Visiting Fellows Program, October 4, 2013.
- The 9/11 Attack on American Airlines Flight 77 and the Pentagon. Veterans Administration Medical Center, Department of Internal Medicine Grand Rounds. Minneapolis, MN, September 13, 2013.
- One Night in August: The I-35W Bridge Collapse in Minneapolis. Houston Regional Catastrophic Preparedness Initiative Mass Fatality Management Symposium. Houston, TX, March 4, 2013.
- One Night in August: The I-35W Bridge Collapse in Minneapolis. Managing Transportation Mass Fatality Incidents: A Course for Emergency Managers, Law Enforcement, and the Medicolegal Community. National Transportation Safety Board, Ashburn, VA, February 6, 2013.
- SIDS, SUID, or Suffocation? The Medical Examiner Perspective. American Association of SIDS Prevention Physicians 21<sup>st</sup> Annual Conference. Minneapolis, Minnesota, September 20, 2012.
- Introduction to the Medical Examiner and Investigation of Death. Association of Forensic Quality Assurance Managers 11<sup>th</sup> Annual Conference. Minneapolis, Minnesota, September 18, 2012.
- Sharp Force Injuries. Innocence Project of Minnesota and Minnesota Bureau of Criminal Apprehension. St. Paul, Minnesota, June 8, 2012.
- Working with Your Medical Examiner as An Expert Witness. Minnesota County Attorneys Association 34<sup>th</sup> Annual Meeting. Bloomington, MN, December 7, 2011.
- Asphyxial Deaths in Infant and Children (keynote address). 30<sup>th</sup> Annual Michigan Statewide Conference of Child Abuse and Neglect: Prevention, Assessment and Treatment. University of Michigan Medical School and Mott Children's Hospital, Plymouth, MI, October 18, 2011.
- Unusual Child Deaths. 30<sup>th</sup> Annual Michigan Statewide Conference of Child Abuse and Neglect: Prevention, Assessment and Treatment. University of Michigan Medical School and Mott Children's Hospital, Plymouth, MI, October 18, 2011.
- The Pathology of Gunshot Wounds: What Every Prosecutor (and Defense Attorney and Judge) Needs to Know. National Black Prosecutors Association Annual Conference, Minneapolis, Minnesota, July 28, 2011.
- The Pathology of Firearm Injuries. Innocence Project of Minnesota and Minnesota Bureau of Criminal Apprehension. St. Paul, Minnesota, May 6, 2011.

- Finding Truth: Exhumations, Examinations, and the Rule of Law in Bosnia and Kosovo. World Without Genocide, William Mitchell College of Law, and the Human Rights Program—University of Minnesota (at the Guthrie Theater), Minneapolis, Minnesota, March 29, 2011.
- Forensic Exhumations in Kosovo. World Without Genocide (at William Mitchell College of Law), St. Paul, Minnesota, October 16, 2010.
- When the Homicide is Complex: Making Sense of What the Pathologist Can Tell You. Innocence Project of Minnesota. Ramsey, Minnesota, May 1, 2009.
- Pediatric Postmortem Toxicology Case Studies, American Academy of Forensic Sciences Toxicology Section, February 20, 2009.
- Disaster Preparation for the Pathologist: Lessons from the I-35W Bridge Collapse. Grand Rounds for Department of Laboratory Medicine and Pathology, University of Minnesota, January 28, 2009.
- Fracture Evaluation in the Pediatric Autopsy: Detection and Pathologic -Radiographic Correlation. Grand Rounds for Departments of Radiology, Pathology, and Pediatrics. University of Mississippi Medical Center, Jackson, Mississippi, January 14, 2009.
- Death Scene Investigations For Infants and Children. Children's Justice Center, Jackson, Mississippi, January 14, 2009.
- The Pathology of Firearm Injuries. Innocence Project of Minnesota and Minnesota Bureau of Criminal Apprehension. St. Paul, Minnesota, May 20, 2008.
- The Pathology of Fatal Child Abuse. Minnesota Juvenile Officers Association annual conference, Duluth, Minnesota, January 2008.
- Diagnosis of Skeletal Fractures in Child Death/Abuse Cases. Oakland County Child Death Investigation Seminar, Oakland County, Michigan, October 2007.
- Infant and Child Death Asphyxial Deaths: Investigation and Prevention. Minnesota Perinatal Organization 33<sup>rd</sup> Annual Meeting, St. Cloud, Minnesota, September, 2007
- Infant Death Scene Investigation. Hennepin County Medical Center Suspected Child Abuse and Neglect Team, Minneapolis, Minnesota, October, 2006.
- The Pentagon Attack: Victims and Human Identification in a Post-9/11 World. 2005 Emergency Preparedness & Prevention and Hazmat Spills Conference, United States Environmental Protection Agency, Baltimore, Maryland, December, 2005.
- Attack on the Pentagon: A Forensic Pathologist's Response. Pennsylvania Dental Association, Harrisburg, Pennsylvania, September 2004.
- Forensic Pathologists and Pediatric Radiologists: Partners in Seeking the Truth. Workshop on Child Abuse, The Society for Pediatric Radiology 47th Annual Meeting and Postgraduate Course, Savannah, Georgia, May 2004.
- Pediatric Asphyxia: Its Many Forms. Minnesota Coroners' and Medical Examiners' Association, October 2003.
- Aviation Pathology and Human Identification in a Post-9/11 World, Milwaukee County Medical Examiner's 14th Annual Forensic Science Seminar, November 2002.

- Inflicted Fatal Abdominal and Thoracic Trauma in Children, Minnesota Coroners' and Medical Examiners' Association, October 2002.
- Real Life Cases from the 'X-Files,' Part II, Minnesota Coroners' and Medical Examiners' Association, October 2002.
- Firearm Injuries, The 12th Forensic Psychiatry Symposium: Post-Death Investigations and Mental Health, Walter Reed Army Medical Center, Washington, DC, April 2002.
- Inflicted Trauma to Children: The Forensic Pathologist's Perspective, Montgomery County (Maryland) Department of Health and Human Services, April 2002.
- Pediatric Postmortem Toxicology Case Studies, American Academy of Forensic Sciences Toxicology Section, February 2002.
- Aviation Pathology: 101, Minnesota Coroners' and Medical Examiners' Association, October 2001
- Real Life Cases from the 'X-Files', Minnesota Coroners' and Medical Examiners' Association, October 2001.
- The Forensic Pathologist as an Expert Witness, Naval Justice School, Newport Naval Station, Newport, Rhode Island, November 2000.
- An Iowa Boy in Kosovo, Minnesota Society of Coroners and Medical Examiners, October 2000.
- Basic Forensic Pathology: An Overview with Case Studies, Advanced Education in General Dentistry Residency Class, Fort Carson, Colorado, August 2000.
- Who Wants to be a Medical Examiner? Riverside Hospital/Columbus, Ohio Family Practice Departments, April 2000.
- Blunt Force Injury, Washington Metropolitan Police Department, February 2000.
- Blunt Force Injuries in Children, Washington Metropolitan Police Department, February 2000.
- Seven Patients Child Abuse or Mimic? Minnesota Coroners' and Medical Examiners' Association, October 1999.
- Sudden Unexpected Nocturnal Death Syndrome, Minnesota Coroners' and Medical Examiners' Association, October 1997.

- The Pathology of Terrorism: The Attack on AA Flight 77 and the Pentagon. Presented orally at the University of Ottawa Fourth Annual Conference in Forensic and Pediatric Pathology, June 9, 2019, Atlanta, GA.
- The Interstate 35W Bridge Collapse in Minneapolis. Presented orally at the University of Ottawa Fourth Annual Conference in Forensic and Pediatric Pathology, June 8, 2019, Atlanta, GA.
- The Opioid Epidemic and the US Forensic Pathology Workforce: The "Perfect Storm". Presented orally at the University of Ottawa Fourth Annual Conference in Forensic and Pediatric Pathology, June 7, 2019, Atlanta, GA.
- Opioids and Death Investigation: A Perfect Storm.'. Presented orally at the United States Public Health Service 54<sup>th</sup> Scientific and Training Symposium, May 8, 2019, Minneapolis, MN.
- The Challenge of Investigating Drug-Related Fatalities—A Chief Medical Examiner's Perspective. Presented orally (part of 'Drug Surveillance in Public Health and Medicolegal Death Investigations') with Jeri Ropero-Miller, PhD, Kemp Chester, MA, MJ Menendez, JD, Jeffrey Locke, JD, DeMia Pressley, MD, Conner Brooks, MSc, Margartet Warner, PhD, and Barry Logan, PhD), American Academy of Forensic Sciences Meeting, February 22, 2019, Baltimore, MD.
- The Exoneration of Kirstin Blaise Lobato. Presented orally (Breakfast Seminar, with Vanessa Potkin, JD, Jane Pucher, JD, and Jeffery Tomberlin, PhD) at the American Academy of Forensic Sciences Meeting, February 22, 2019, Baltimore, MD.
- The Opioid Crisis: Supporting County Medical Examiner and Coroner Offices. Presented orally (with Dotti Owens, D-ABMDI and Richard Jorgenson, MD) at the National Association of Counties Annual Conference, July 15, 2018, Nashville, TN.
- The Making of an Opioid Crisis in America? Why Research, Policy, and Practice Matter. Presented orally (Breakfast Seminar, with Barry Logan, PhD and Agnes Winokur, MA) at the American Academy of Forensic Sciences Meeting, February 23, 2018, Seattle, WA.
- Detection and Documentation of Fractures in the Deceased Child. Presented orally at the International Association of Forensic Sciences 21<sup>st</sup> Triennial Meeting, Toronto, Ontario, Canada, August 25, 2017.
- Cognitive Bias in Forensic Pathology: What It Is, What It Is Not, and Why You Need to Care. Presented orally at the National Association of Medical Examiners Meeting, Minneapolis, MN, September 13, 2016.
- Assessing the Need for a Forensic Pathology Fellowship Match Program: Presentation and Panel Discussion (presenting author Reade Quinton, MD; with Jessica Lelinski, MD and Jeffrey Jentzen, MD). Presented orally at the National Association of Medical Examiners Meeting, Minneapolis, MN, September 13, 2016.

# Abstracts (continued)

- Interdisciplinary Collaboration in the Evaluation of Sudden Unexpected Death of a Young Male (presenting author Dennis Firchau, MD; with Arno Wuenschmann, DVM and Jaclyn Dykstra, DVM). Presented orally at the National Association of Medical Examiners Meeting, Minneapolis, MN, September 11, 2016.
- Forensic Pathology as a Forensic Science: What Is 'Bias' and Why Does It Matter? Presented orally at the American Academy of Forensic Sciences Meeting, Las Vegas, NV, February 27, 2016.
- One Night in August: The I35W Bridge Collapse in Minneapolis. Presented orally (Breakfast Seminar) at the American Academy of Forensic Sciences Meeting, Las Vegas, NV, February 25, 2016.
- Sudden Death is Less Common in Young Competitive Athletes Than in Non-athletes: But We Systematically Screen Only Athletes. Maron B, Haas TS, Duncanson ER, Garberisch RF, Baker AM, Mackey-Bojack S. American Heart Association 2015 scientific sessions, Orlando, FL, November, 2015.
- Methamphetamine-Positive Deaths in Hennepin County, Minnesota: A 15-Year Review of Cause of Death, Manner of Death, and Toxicological Findings. Presented orally at the National Association of Medical Examiners Meeting, Charlotte, NC, October, 2015
- Forensic Pathology as a Forensic Science: History, Current Challenges, Improving Quality, and Understanding Cognitive Bias. Presented orally at the Forensic Science Error Management: International Forensics Symposium (National Institute of Standards and Technology), Washington DC, July 22, 2015.
- Establishing a Multidisciplinary Network for the Workup of Sudden Cardiac Death (with Raed Abdelhadi, MD, Emily R. Duncanson, MD, Kate Lynch, MS, and Shannon Mackey-Bojack, MD). Presented orally at the National Association of Medical Examiners Meeting, Portland, OR, September, 2014.
- Sudden and Unexpected Infant Deaths: Making Sense of the Diagnostic Quagmire and the National Sudden Unexpected Infant Death (SUID) Case Registry Initiative (with Theresa Covington, MPH, Thomas A. Andrew, MD, and Lena Camperlengo, PhD). Presented orally at the National Association of Medical Examiners Meeting, Milwaukee, WI, October, 2013.
- Forensic toxicology: killer caffeine (lead author Katzung KG, with Cole JB). Presented in poster form at the North American Congress of Clinical Toxicology annual meeting, 2013.
- Evaluation of death temporally related to custody (with Michael Graham, MD and Donald Dawes, MD). Presented orally at the National Association of Medical Examiners Meeting, Juneau-Sitka, AK, August, 2011.
- The Perfect Murder (?) (presenting author Agnieszka Rogalska, MD). Presented orally at the National Association of Medical Examiners Meeting, San Francisco, CA, September, 2009.

# Abstracts (continued)

- One Night in August: The I-35W Bridge Collapse in Minneapolis (with Jonathan G. Thompson, MD, Owen L. Middleton, MD, Roberta J. Geiselhart, BSN, Jackie K. Soucek, BS, and Mitchel K. Morey, MD). Presented orally at the National Association of Medical Examiners Meeting, Louisville, KY, September, 2008.
- "Charmed": Fatal encephalopathy following lead ingestion. Presented orally at the National Association of Medical Examiners meeting, Savannah, GA, October, 2007.
- Compressional asphyxia due to prone restraint hold in a child (presenting author Robert F. Corliss, MD). Presented orally at the American Academy of Forensic Sciences meeting, San Antonio, TX, February, 2007.
- Commotio cordis while slam dancing in a mosh pit. (with Shannon Mackey-Bojack, MD and Barry Maron, MD). Presented orally at the National Association of Medical Examiners Meeting, San Antonio, TX, October, 2006.
- Hyperglycemic hyperosmolar nonketotic syndrome in a sixteen-month old child with rotaviral diarrhea (presenting author Mary Carr, MD). Presented orally at the American Academy of Forensic Sciences meeting, Seattle, WA, February, 2006.
- Magnetic resonance microscopy as an adjunct in the evaluation of infant rib fractures (with Kimberlee Potter, PhD and William Oliver, MD). Presented orally at the American Academy of Forensic Sciences meeting, Chicago, IL, February, 2003.
- Fatal diphenhydramine intoxication in infants (with Deborah Johnson, MD, Joseph Levisky, MS, William Hearn, PhD, Karla Moore, PhD, and Barry Levine, PhD). Presented orally at the National Association of Medical Examiners meeting, Richmond, VA, October 2001.
- Kosovo First Response: Field Experiences of a US Medical-Legal Team (with William C. Rodriguez III, PhD, Abubakr A. Marzouk, MD, Joyce A. Lapa, MD, Craig T. Mallak, JD, MD, and Grant R. Graham, MFS). Presented orally at the American Academy of Forensic Sciences Meeting, Seattle, WA, February 2001.
- A novel hunting accident? (with Geoff Keller, SA, AFOSI, and David Garcia, SA, AFOSI). Presented in poster form at the National Association of Medical Examiners meeting, Indianapolis, IN, September 2000.
- Unexpected death due to polyclonal systemic immunoblast proliferation (with Kathryn K. Berg, MD, and Daniel W. Davis, MD, Hennepin County Medical Examiner's Office, Minneapolis, MN). Presented in poster form at the National Association of Medical Examiners meeting, Minneapolis, MN, October 1999.

## Abstracts (continued)

- Are trophoblastic microemboli a marker for preeclampsia-eclampsia in sudden unexpected maternal death? A case report and review of the literature (with Kathryn K. Berg, MD, and Mitchel K. Morey, MD, Hennepin County Medical Examiner's Office, Minneapolis, MN, and John T. Crosson, MD, Department of Pathology, Hennepin County Medical Center, Minneapolis, Minnesota). Presented orally at the National Association of Medical Examiners meeting, Minneapolis, MN, October 1999.
- Digital imaging of whole mount surgical and autopsy specimens for research, education, and publication (with Robert Folberg, MD, Depts. of Pathology and Ophthalmology, University of Iowa). Presented in poster form at ASCP Meeting, San Diego, CA, Fall 1996.
- Superoxide dismutase in adenocarcinoma of the prostate (with Michael Cohen, MD, Dept. of Pathology, University of Iowa). Presented in poster form at USCAP Meeting, Toronto, Spring 1995.

### **Publications**

- **Baker AM**. College of American Pathologists (CAP) Forensic Pathology Resource Committee. 2020 FR-A Forensic Pathology Program (SAM Eligible): *Alkaline Ingestion*. Northfield, IL: CAP; 2020.
- **Baker AM**. College of American Pathologists (CAP) Forensic Pathology Resource Committee. 2020 FR-A Forensic Pathology Program (SAM Eligible): *Hyperosmolar Hyperglycemic State*. Northfield, IL: CAP; 2020.
- Klein C, **Baker AM**. *Hypothermia*. College of American Pathologists Forensic Pathology Program: FR-B, 2019.
- **Baker AM**. Strangulation. College of American Pathologists Forensic Pathology Program: FR-B, 2018.
- Gunsolus I, **Baker AM**. *Opioids, fentanyl, and fentanyl analogs*. College of American Pathologists Forensic Pathology Program: FR-A, 2018.
- Gunsolus I, **Baker AM**. *Difluoroethane toxicity*. College of American Pathologists Forensic Pathology Program: FR-B, 2017.
- Bitting C, **Baker AM**. *Pulmonary Granulomatosis*. College of American Pathologists Forensic Pathology Program: FR-B, 2017.
- Bitting C, **Baker AM**. *Shotgun wounds*. College of American Pathologists Forensic Pathology Program: FR-A, 2017.
- **Baker AM**. Fractures in the deceased infant. College of American Pathologists Forensic Pathology Program: FR-B, 2016.
- Maron BJ, Haas TS, Duncanson ER, Garberich RF, **Baker AM**, Mackey-Bojack S. Comparison of the frequency of sudden cardiovascular deaths in young competitive athletes versus nonathletes: should we really screen only athletes? Am J Cardiol 2016; 117(8): 1339-41.
- **Baker AM**. Spontaneous coronary artery dissection. College of American Pathologists Forensic Pathology Program: FR-B, 2015.
- Wilcoxon R, Jackson L, **Baker AM**. Suicide by hypothermia: a report of two cases and 23-year retrospective review. Academic Forensic Pathology 2015; 5(3): 462-475.
- Rogalska A, Thompson J, **Baker AM**. The perfect murder: how a suicide became a homicide. Academic Forensic Pathology 2015; 5(3): 481-491.
- Duncanson ER, **Baker AM**, Abdelhadi R, Lynch K, Mackey-Bojack S. Establishing a multidisciplinary network for the workup of sudden cardiac death. Academic Forensic Pathology 2015; 5(2): 221-232.
- Lelinski JS, **Baker AM**. Cerebral toxoplasmosis presenting as a medical examiner case. Academic Forensic Pathology 2015; 5(2): 359-368.
- Davis GG, **Baker AM**. Overview of the Organization of Scientific Area Committees. Academic Forensic Pathology 2014; 4(4): 474-479.
- Meyers SE, Crary GS, **Baker AM**. Unexpected death from hemorrhagic pericarditis complicating IgA nephropathy. Academic Forensic Pathology 2012; 2(1): 206-211.

# Publications (continued)

- Thompson JT, Baker AM, Bracey AH, Seningen J, Kloss JS, Strobl AQ, Apple FS. Fentanyl concentrations in 23 postmortem cases from the Hennepin County Medical Examiner's Office. Journal of Forensic Sciences 2007; 52(4): 978-981.
- Nolte KB, Hanzlick RL, Payne DC, Kroger AT, Oliver WR, Baker AM, McGowan DE, DeJong JL, Bell MR, Guarner J, Shieh W, Zaki SR. Medical Examiners, Coroners, and Biologic Terrorism: A Guidebook for Surveillance and Case Management. MMWR Recomm Rep 2004; 53(RR-8): 1-36.
- Lonergan GJ, Baker AM, Morey MK, Boos SC. Child abuse: radiologic-pathologic correlation. Radiographics 2003; 23(4): 811-845.
- Baker AM, Johnson DG, Levisky JA, Hearn WL, Moore KA, Levine B, Nelson SJ. Fatal diphenhydramine intoxication in infants. Journal of Forensic Sciences 2003; 48(2): 425-428.
- Baker AM, Craig BR, Lonergan GJ. Homicidal commotio cordis: the final blow in a battered infant. Child Abuse and Neglect 2003; 27: 125-130.
- Oliver WR, Baker AM, Powell JD, Cotone CM, Meeker J. Estimation of body exposure to explosion. The American Journal of Forensic Medicine and Pathology 2002; 23(3):252-6
- **Baker AM**, Keller G, Garcia D. A novel hunting accident: discharge of a firearm by a hunting dog. The American Journal of Forensic Medicine and Pathology 2001; 22(3): 285-287.
- Baker AM, Davis DW, Berg KK. Polyclonal systemic immunoblast proliferation: An unusual hematologic entity presenting as a medical examiner case. Journal of Forensic Sciences 2001; 46(1): 156-159.
- Baker AM, Morey MK, Berg KK, Crosson J. Trophoblastic microemboli as a marker for preeclampsia-eclampsia in sudden unexpected maternal death: A case report and review of the literature. The American Journal of Forensic Medicine and Pathology 2000; 21(4): 354-358.
- Mabry RL, Holcomb JB, Baker AM, Cloonan CC, Uhorchak JM, Perkins DE, Canfield AJ, Hagmann JH. U.S. Army Rangers in Somalia: Analysis of combat casualties on an urban battlefield. The Journal of Trauma 2000; 49(3):515-529.
- **Baker AM**, Oberly LW, Cohen MB. Expression of antioxidant enzymes in human prostatic adenocarcinoma. The Prostate 1997; 32:229-233.

# **Book Chapters**

- **Baker AM**. Pediatric Asphyxial Deaths. In Forensic Pathology of Infancy and Childhood (Collins KA and Byard RW, eds.) Springer: New York, 2014.
- **Baker AM**. Evaluation of Pediatric Fractures at Autopsy. In Forensic Pathology of Infancy and Childhood (Collins KA and Byard RW, eds.) Springer: New York, 2014.

### Reviews, Editorials, and Commentary

- **Baker AM**. Commentary on: Quarino et al. Mandatory certification of forensic science practitioners in the United States: A supportive perspective. Forensic Science International: Synergy 2019; 1(1): 161-169. Forensic Science International: Synergy. DOI information: 10.1016/j.fsisyn.2019.09.007
- Ackerman MJ, Andrew TA, **Baker AM**, Devinsky O, Downs JCU, Keens T, Kuntz J, Lin P, Lear-Kaul KC, Reichard R, Robinson DA. An association of hippocampal malformations and sudden death? We need more data. Forensic Sci Med Pathol 2016; 12(2):229-31. PMID: 27017493
- **Baker AM**. Letter from the guest editor. Academic Forensic Pathology 2015; 5(3): ix-x.
- Baker AM, Crandall L. To hold or not to hold. Forensic Sci Med Pathol 2009; 5(4): 321-3.
- **Baker AM**. Book review: *The Virtopsy Approach: 3D Optical and Radiological Scanning and Reconstruction in Forensic Medicine* (Thali MJ, Dirnhofer R, Vock P, editors. Boca Raton, FL: CRC Press, 2009, 516 pp.) Journal of Forensic Sciences 2010; 55(2): 566.

### Media/Public Appearances (selected)

- Guest, *The Addiction Connection* podcast, hosted by Kurt Devine, MD and Heather Bell, MD. https://theaddictionconnection.buzzsprout.com. September 8, 2020.
- Speaker, NAME Foundation Fundraiser, Kansas City, MO, October 20, 2019.
- Consulting forensic pathologist, Last Week Tonight With John Oliver (HBO). May 19, 2019.
- Forensics and Justice—Kosovo: The Experience of a Forensic Pathologist. Post-play discussion following Heaven (created, written, and composed by Joe Chvala and Chan Polling). Park Square Theater, St. Paul, MN, June 16, 2019.
- Justice After Genocide: A Survivor, A Prosecutor, and a Forensic Pathologist. World Without Genocide, Michell-Hamline School of Law, St. Paul, MN, April 16, 2019.
- Keynote Address, Northern Star Council (Boy Scouts of America) Leadership Breakfast for the *Million Dollar Day for Scouting*, 2017 Friends of Scouting Campaign, December 7 (St. Paul, MN) and 8 (Minneapolis, MN), 2016.
- Lead-off speaker, 50th Anniversary NAME Foundation Fundraiser featuring Dr. Jan C. Garavaglia, Minneapolis, MN, September 10, 2016.
- Guest, A Public Health Journal: Sudden Unexpected Infant Death—Trends and Education. Minnesota Department of Health and Metro Cable Network, January 15, 2014.
- Consulting forensic pathologist, *The International Exhibition of Sherlock Holmes*. World Premiere October 2013, Oregon Museum of Science and Industry. www.sherlockholmesexhibition.com
- The Morning Show with Big Sy and Lisa Moy. KMOJ 89.9, Minneapolis, December 14, 2011.
- The Science, and Science Fiction, of Forensics. Midmorning with Kerri Miller. Minnesota Public Radio, March 25, 2011.

# Fellows Trained

Ray Rivera, MD	2002-2003
Kenneth Gallagher, MD	2003-2004
Quinn Strobl, MD	2004-2005
Robert Corliss, MD	2005-2006
Jonathan Thompson, MD	2006-2007
Agnieszka Rogalska, MD	2008-2009
Dennis Firchau, MD	2009-2010
Michael Madsen, MD	2010-2011
Sarah Meyers, MD	2011-2012
Enid Boeding, MD	2012-2013
David Taylor, MD	2013-2014
Jessica Lelinski, MD	2014-2015
Stephanie Stauffer, MD	2015-2016
Marisa Jacob, MD	2016-2017
Megan Quinn, MD	2017-2018
Kendra Palmer, MD	2018-2019
Leah Schuppener, DO	2019-2020
Marie-Eve Meehan, MD	2020-present